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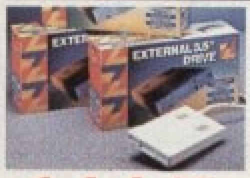
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Canon PRINTERS

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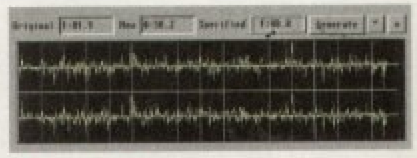
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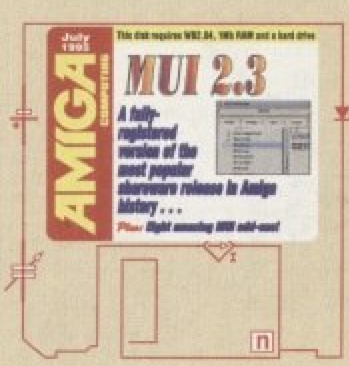
Bought out!

Find out what Escom are planning for the Amiga and why everyone's favourite machine could be in pole position for the future

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THE COVERDISKS

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MUI - registered version

An amazing alternative interface that lets you create your own designer look for all manner of Amiga applications. An essential tool for anyone who wants the ultimate interface



Utilities galore

We all want an easy life, and these utilities certainly make using your Amiga an amazing place. What's more, they will give your machine that all important face lift.

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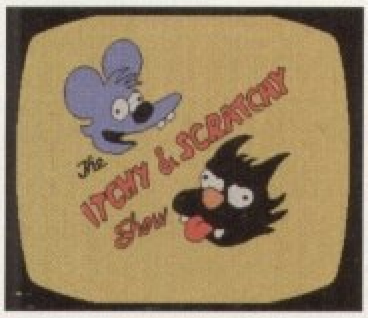
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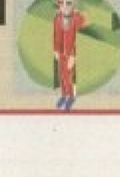
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Subscriptions



Turn to page 64...

...for details of *Amiga Computing's* subscription offers this month



Double Dealing from HiSoft!

Exclusive Hot News

Following a lengthy investigation, we have discovered irrefutable evidence that Amiga publisher HiSoft is engaged in double-dealing. Although the company is known for top-selling titles such as Devpac 3, Megalosound and Squirrel SCSI, it now seems that HiSoft is prepared to offer a number of these professional packages bundled together at prices that can only be described as suspicious.

Our reporter gained an exclusive interview with David Link, of HiSoft, who made this outrageous claim: *"We have been supporting the Amiga community for 10 years now with a range of software and hardware packages. As a thankyou to all the loyal supporters of this amazing computer, we decided to make some very special 'birthday' offers to readers of this magazine."*. Double-talk? We'll leave you, the reader, to judge …

Termite

DoubleDeal £39.95 + P&P inc CIX joining fee worth £25!

88% Amiga Computing 95% AUI 88% CU Amiga

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Termite is designed to take full advantage of all of the newest features of Workbench 2™ and beyond. It is 100% Amiga Style Guide compliant and provides you with all of the modern user interface features to really enjoy playing in the highway!



the Termite Button Bar

AURA

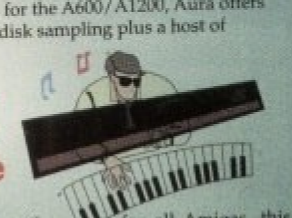
12/16 bit PCMCIA Sound Sampler

96% Amiga Shopper 90% AUI

The latest of our highly acclaimed sound samplers for the A600/A1200, Aura offers high performance 12/16 bit quality with direct-to-disk sampling plus a host of software features. Octamed 5.04 up compatible.

Aura is perfect as a stand-alone effects unit or as a complete sampling package.

ProMIDI Interface



The ideal MIDI interface for all Amigas, this smart-looking device comes with MIDI in, MIDI thru and two MIDI out ports and is complete with manual, software and a flying cable for convenient positioning.

DoubleDeal £89.95 + P&P Aura & ProMidi Save £34.95!

GameSmith

Professional game development is made easy with the new GameSmith Development System. Over 3 years in the making, GDS gives you the low level power to create the masterpiece of your dreams in a single, comprehensive, easy to use system.

GameSmith fully supports and is compatible with all Amigas including AGA. A C Compiler or 680x0 Assembler is required. From shoot-'em-ups to graphic adventures, from intergalactic conquest to strategic simulation, the GameSmith Development System is the perfect solution.

90% AUI 92% CU Amiga

Devpac 3 Amiga

The top-rated, professional's choice for Amiga assembly language development, Devpac 3 is a complete package of 68000-68040 assembler, debugger, editor and linker. Ideal for beginner and expert alike, Devpac 3 is the perfect companion for Gamesmith.

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Twist 2

The Amiga Database

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92% Amiga Shopper 91% Amiga Format

Maxon Magic



This is the utility that you simply must own! Maxon Magic is a funtastic combination of 20 different animated screen savers, a system event sound manager and many amusing sampled sounds that will not only be incredibly useful but will give you and your friends endless enjoyment as well.

Squirrel Storage Systems



Amiga Format 93% CU Amiga 94% Amiga Shopper 95%

As you can see, the Amiga press has gone nuts over our new Squirrel SCSI interface for the A600/A1200. In case you've missed these reviews, the Squirrel SCSI is a plug-and-play add-on that allows you to connect up to 7 SCSI peripherals to your Amiga. Just think of it, CD-ROM, Hard drive, Scanner, DAT, Optical, SyQuest, Tape Streamer - all on line at the same time! No wonder we named it after that famous storage-hungry animal! To go with Squirrel, we have some great value devices…

Squirrel SCSI Devices

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All prices include UK VAT

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To order any of the special DoubleDeals shown on this page (or any other HiSoft product, see the list opposite) - just call us, free of charge, on 0500 223660, armed with your credit or debit card and quote DDAC; we will normally despatch within 4 working days (£4 P&P) or, for only £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal orders. All prices include VAT. Export orders: call or fax to confirm pricing and postage costs. © 1995 HiSoft. E&OE.

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HiSoft products for your Amiga:
Here is a list of HiSoft titles for the Amiga computers (prices shown are the individual RRPs): Squirrel SCSI interface - £69.95, Squirrel Storage Systems - please call, Aura 12/16 bit sampler - £99.95, Megalosound 8 bit sampler - £34.95, ProMidi interface - £24.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £99.95, Gamesmith - £99.95, Termite - £39.95, Twist 2 database - £99.95, Maxon Magic - £29.95, Upper Disk Tools - £14.95, VistaLite inc MakePath/TerraForm - £39.95 and much more. Coming soon: DiskMagic (disk tools) and Cinema4D.

NEWS

By ADAM PHILLIPS

Buyer found for Commodore

Escom: The new owners of Commodore

The official news from New York is that Escom have bought all the rights of ownership, technology, trademarks and patents to Commodore and the Amiga. After the somewhat harassing two days of 20-21 April, Escom's final bid of $10 million for Commodore's core assets was accepted over surprise bidder, Dell's, which stood at £13 million for the core assets. Unfortunately for Dell, their bid had certain strings attached to it which would have meant delaying the buyout further.

In a shock move, one-time favourite, Commodore UK, dropped out of the auction altogether, knowing they didn't have enough money to take on Escom or Dell. The other one-time favourite, Creative Equipment International, made a hasty alliance with Dell on the day but was unsuccessful and managed to upset Escom in the process for going against them in the bidding process.

As well as the bid being accepted by the US courts, the deal has also been approved by the Bahamian courts, making Escom's position as the new owners of Commodore final.

For the full story, turn to our five-page breakdown, starting on page 23, of the bidding day, and the interviews with the winner and losers.

Stop the press: C=UK time bomb

An unconfirmed rumour flapping its wings round the rumour mill is that if Commodore UK haven't found a buyer by the end of May, they will file for liquidation. Apparently, David Pleasance and Colin Proudfoot, joint MDs of the company, have warned in accounts filed at Companies House that the business can only survive up to the end of May.

No-one was available at the time of going to press to comment on the situation. If the above is true, one can only hope that C=UK's negotiations with Escom are successful.

Head of engineering appointed

With the recent buyout of Commodore, Escom would appear not to be resting on their laurels by appointing Dr Peter Kittel as the head of engineering for the Amiga. Kittel, ex-head of Commodore Germany, has released details on the new daughter company of Escom AG which will be based in Heppenheim in Germany and will deal with all developments concerning the Amiga.

There will be an engineering department for hardware and OS software. Also planned is an extensive marketing department, and Kittel estimates there will be a workforce of 50 people at the beginning.

If there are individuals reading this who are interested in working for the new company, they should send their resumés to: Escom AG, Personalabteilung, Tiergartenstr. 9, D-64646 Heppenheim, Germany.

Initial plans are to restart the production of existing machines (600/1200/4000) but because of Escom's casing policy, the 4000 at least should receive a new look. No immediate models will be altered technically because Kittel doesn't want to delay the re-release schedule – any alterations will come later.

As for the future, it can be confirmed that the way forward for the Amiga is RISC-based. The two principle systems being considered are Power PC and Hewlett Packard's PA RISC. "It will be the first task of engineering to prepare this choice of paths into the future" commented Kittel.

He also states that Escom have decided to be very "liberal" in regards to licensing the Amiga technology out to third parties: "Whoever wants to build, for example, an Amiga lap-top or set-top box can get the chips and OS!"

The new head of engineering is quick to point out, though, that all the above "is still a letter of intent. The points which are declared are still open."

Whatever the case, it's good to see Escom are moving so swiftly.

GVP saved

Parallels aplenty this month with another German company stepping in to save the day and revamp part of the Amiga's heritage. The critically-acclaimed hardware producers, GVP, having bitten the bullet, have had their intellectual rights bought by German-based company M-Tec in conjunction with Power Computing in Britain.

The only product available to buy at present is GVP's RAM. For the rest of the extensive catalogue, potential buyers will have to wait another two months. The catalogue at the moment consists of the 68040/68060 accelerator for the 2000/3000/4000, a 16-bit sound sampler, the HC8 SCSI interface and the I/O Extender, among others.

"This is a great day for the Amiga – first the buyout of Commodore and now GVP have been plucked from the jaws of ruin" commented Tony Ianiri of Power Computing. "There's a wind of hope blowing through the Amiga community and this is just the beginning. Things can only get better."

For more details, contact Power Computing on 01234 273000.

More storage with a zip



The Zip drive – could this system replace the floppy drive in the future?

Utah-based Iomega Corporation have released the Zip drive and Zip disk – the Zip drive is a compact, portable solution for moving information between work and home, expanding hard disk capacity, organising and saving business and personal financial records, and sharing large files. Basically, the system works along a similar line to floppy disks but offers a far bigger storage capacity. Zip disks are available in 100 and 25Mb capacities, and can be purchased in single packs or economical five packs.

"Our new Zip drive is unlike any other storage product on the market," said Timothy L Hill, vice president of marketing for Iomega Corporation. "It's like getting four drives in one. It's an unlimited upgrade for your filled up hard disk; a high-capacity mobile storage solution; a personal organiser of your stuff; and, it's an excellent back-up drive."

Every Zip drive comes complete with a starter Zip disk that includes ZipTools software to help consumers organise, track and quickly locate their computer information.

Contact Iomega Corporation's UK headquarters on 0181-899 1734 for more details.

WTS update

Wounded consumers awaiting news of developments in the WTS fraud case will have to wait longer than they hoped for a conclusion to the criminal proceedings brought against the mail order firm. *Amiga Computing* contacted DC Ron Lack, one of the key police personnel investigating the case for an update: "There's no change and there isn't likely to be for a number of months yet... when we've seen the wood for the trees so to speak, we'll be able to give angry customers the full picture. The time it takes is simply the nature of this particular beast."

Indeed, fraud is a laborious crime to prove sufficiently and it would seem that consumers are going to have to be patient for the time being. In the meantime, if there are still further disgruntled customers who want to pass on any information to the police, here's the address to write to: DC Ron Lack, Bedfordshire Police Fraud Squad, Ampthill Police Station, Woburn Street, Ampthill MK45 2HX. Please don't ring – they're busy enough.

The call of the Big Smoke

After last month's call for animators to submit work to the European Festival of Animation, another exhibition has appeared in the form of the London Effects and Animation Festival. Acting as a showcase for the best in creativity in Europe, the show has attracted some high calibre competition in the last few years from companies across the world.

The event is split into several categories that include art, broadcast graphics, commercials, interactive entertainment, feature films, music video films and student work, among others. The closing date for all entries is 8 September. These entries will be judged by a panel of experts made up of media, potential clients and fellow professionals, and the awards will be handed out on 29 November.

Also included during the festival is a three-day programme of seminars and screenings which takes place alongside the Computer Graphics Expo at the Wembley Conference Centre from 28-30 November.

For more details and an entry form, call Debbie Brown on 0181-995 3632.

London Effects and Animation Festival: Get your work seen by potential employees



Ex-BT engineer fined for software theft

In another joint collaboration between ELSPA and the police, a raid was carried out on the home of ex-BT engineer, Alan Pirie, leading to a conviction and seizure of £200,000 worth of illegal software. Pirie was found guilty of six offences of selling and possessing, and was fined £1000 and ordered to pay £100 costs.

"One the major aims of ELSPA is to crack down on the illegal copying and distribution of pirated software" commented John Loader, head of ELSPA's crime unit. "As an industry, the computer and leisure software sector needs to be protected against those individuals or organisations that seek profit from its illegal activities."

Anyone with information concerning pirated software should call ELSPA on 01386 830642 in confidentiality.

NEWS

Further Photogenics

Those busy bods at Almathera have released another upgrade for their critically-acclaimed image processing package, Photogenics. Version 1.2 has had a series of new options added to it – warper tools allowing you to distort, bend, stretch and twirl parts of your image, printing capabilities, CyBERgraphics 24-bit painting, transparency gradients, the much-needed crop facility and for those without AGA machines, a HAM6 display option.

Improvements have been made to the previews and compose modes, and there are also some new paintmodes (colourise, gamma, mirage, jitter), NewIcon support, new GIOS (TIFF, PCX, HAM6, Retina, ProGrab24 among others). If you're a 1.1a owner, the upgrade will cost £15. For a brand spanking new copy, the price tag is £59.95.

Call Almathera on 0181-687 0040 for more information.

Netting the benefits

While many people are convinced of the potential offered by the Internet for a variety of purposes, there are still sectors that remain unconvinced, according to Future Marketing. The company believe that the Net is being seen by some as nothing more than a fad, and those people need to be informed about the benefits of using the Web.

Aimed at IT and marketing professionals, Future Marketing are hosting a series of day-long non-technical seminars. The day itself begins at nine and runs through to 17:30, addressing some of the most common questions from a Net novice – what exactly is the Internet? Are the companies employing it being successful?... and so on.

The cost of the seminar is £285 + VAT per delegate which includes lunch, refreshments and literature, and places can be reserved on 01737 222615. The first seminar takes place on June 14th.

The Fall & Rise in Amiga Frame Grabbing...

NEW VERSION 2.5 SOFTWARE NOW INCLUDED! (See details bottom left)

AMIGA SHOPPER READER AWARDS... "And the winner is - ProGrab" VOTED... 1st PLACE IN THE VIDEO HARDWARE SECTION!

ProGrab™ caused a Real Fall in the Price of Quality Frame Grabbing - the Rise in Standards speak for themselves!

The revolutionary ProGrab™ 24RT with Teletext is not only the best way to get crisp colour video images into your Amiga, it actually costs less than any of its rivals. This real time, PAL-SECAM-NTSC*, 24-Bit colour frame grabber/digitiser has slashed the price of image grabbing on the Amiga, and at the same time has received rave reviews for its ease of use and excellent quality results. ProGrab™ has received honours from just about every Amiga magazine! And... with ProGrab™ you needn't be an expert in Amiga Video Technology either... A simple 3 stage operation ensures the right results - Real Time, after time.



Grab images with your camcorder.

Take a signal from a TV with SCART output

Use a satellite receiver as your output device.

Grab TV or video pictures from your VCR's video output

STAGE 1...

Select any video source with composite output. This could be your camcorder, TV with SCART output, satellite receiver, domestic VCR/player or standard TV signal passing through your VCR/player... the choice is yours.

STAGE 2...

With ProGrab's software, select an image you wish to capture using the on screen preview window - and Grab (because the hardware grabs frames in real time, there's no need for a freeze frame facility on the source device). ProGrab™ even includes a Teletext viewing/capturing facility from either TV or satellite sources. Once grabbed, simply download and view the full image on your Amiga screen.

STAGE 3...

Use the image with your favourite word processor, DTP or graphics package.

Pro GRAB 24RT

ProGrab™ **really does** make it that simple!

ProGrab™ supports any Amiga with Kickstart 2.04 or later and 1.5Mb. free RAM.

ProGrab™ has just been voted as The Best Video Hardware product for the Amiga. This is especially pleasing because the award comes from the magazine's readers - our satisfied customers!

ProGrab™ boasts a 92% Gold rating by Amiga Format with comments like... "ProGrab hardware is top notch" and "For sheer value for money, ProGrab cannot be beaten"

CU Amiga's rating of 86% said ProGrab™ is... "Just the job for beginners and semi-professionals on a tight budget" and, "very hard to beat. For the money, nothing can touch it"

ProGrab™... supports all recent Amigas and is also fully AGA Chipset compatible. You can even [illegible] the new graphics modes up to [illegible] x 512 [illegible] HAM 8 (Amiga RAM permitting). Images are digitised in 24-Bit, 16.8 million colours.

ProGrab™... supports IFF, ILBM, ILBM24, Clipboard, JPEG, BMP, PCX, TIFF, ProGrab™ File or Anim5 File output formats. All these formats can now also be read into ProGrab™ directly too. A new range of image processing effects, palette computing routines (AGA only) and dithering methods are also new to ProGrab™ V2.5.

ProGrab™... software has built in mono and colour animation facilities. The number of frames is dependant upon your Amiga's RAM.

ProGrab™... Release 2.5 software [illegible]...
- Support for Virtual Memory... allows the highest resolutions - even with low memory Amigas (all Hard Drive Systems without the need for an MMU, requiring just 1Mb. Hard Drive Space).
- Additional Teletext Facilities... Now available with Terrestrial TV signals too.
- Larger Preview Window... Double resolution 4 times the area
- International Support... [illegible] with [illegible] PAL, SECAM and NTSC straight from the box.

For just £129.95

ProGrab™ is supplied with everything you'll need...
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Standard ProGrab™ hardware is PAL/SECAM/NTSC compatible - interlace mode options available with PAL & SECAM only. NTSC Only models are available to special order which then support the interlace mode fully. Please ask us for full details.

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Three million and rising

That on-line service, CompuServe, just keeps pumping out those press releases – in this month's instalment, the company has now officially achieved over three million paying users. They claim they are signing up as many as 60,000 new members each week.

"In the past year, there has been tremendous interest in on-line services and the Internet. And as the undisputed leader in on-line content, global networking and information services, CompuServe has become the place to be for millions of people" stated Barry Berkov, CompuServe's executive vice president.

CompuServe

CompuServe just keeps growing and growing

Read/write CD!

Massive storage capabilities are now available to the home user – Hi-Q have announced the imminent launch of the Panasonic PD System Optical Drive. Coming with a quad speed CD-ROM, a Hybrid 650Mb and an Optical Read/Write system allowing access to stockpiles of information at the click of a button, the system costs £680 approx.

Call Hi-Q on 0181 909 2092 for more details.

Mega oops!

Our review of Easy Ledgers in the May issue of *Amiga Computing* gave the price as £29.99. Unfortunately, the suppliers, Wizard Developments, have phoned up to inform us that the package actually costs £199.99. For those interested in purchasing Easy Ledgers, they should adjust the value for money score from nine to six.

This is Apollo calling

Accelerators seem to be on the increase as people want more and more power for their upgrade-starved Amiga. New from Siren software is a range of accelerators with hooky title of Apollo.

The top of the range Apollo 1230 Turbo 50 for the 1200 runs at just under 10 MIPS. The card fits into the trapdoor slot of the Amiga which isn't too healthy for memory upgrades. Call Simon Cobb on 0161-796 5279 for more details.

IT illiterate

Over two-thirds of small businesses are admitting they aren't as clued up as they'd like to be with the ever-growing world of information technology. In a survey conducted by Lloyds bank of 300 small firms, just over half the businesses said they were computer literate – lack of technical support, suitable training courses and objective advice being the main problem areas according to the small businesses contacted.

Also identified by the survey were several areas of missed potential – for example, one fifth of larger firms polled still don't use computers for invoicing and credit control.

John Spence of Lloyds bank commented: "It is clear from these findings that many consider themselves inadequately informed on the subject. As we are increasingly moving towards a world dominated by technology, the findings are clearly a cause for concern."

Change of number

For those interested in buying the Advanced Amiga Analyser (reviewed in the May issue), the company to order from has changed. The new suppliers Dart Computer Services can be reached on 0116 247 0059 and the price remains the same - £49.95.

Stay tuned

For the latest news on *Amiga Computing* and all things Amiga, take a look at our home page. Tap in the following URL Web address:

http://www.demon.co.uk/amigacomp

While you're there, take a look at our list of top ten fave sites on the Internet and access them.

News briefs

Lightwave has arrived

Lightwave 4, the package that everyone knows about, is now available from Premier Vision, and owners of 3.5 can upgrade to the latest version on any platform (Amiga, PC, SGI, Dec Alpha) for a paltry £150. The price for the full version is £695.

Call Andy Bishop or Andy Gould on 0171-721 7050 for more details.

Anim update

For those interested in the European Festival of Animation (as featured in last month's news), the organisers have a new number for interested parties – 01295 264711. The closing date for entries is the end of June.

Photographic print outs

Printers that can produce near photographic print outs are highly sought after. With the wealth of Amiga art packages such as Photogenics and Deluxe Paint 5, such a piece of kit would be ideal for small design companies and artists.

The Primera and PrimeraPro colour printers from Chicago-based Parallax Technology have been out for quite some time now, offering a range of dye-colour sublimation colour images for its users. With the arrival of their new Amiga-specific colour print driver though, 24-bit images can now be printed out.

The driver is free to all existing Primera/Pro owners and is available as standard to potential buyers. For more info, contact Parallax Technology on 001 312 645 4835.

CD-ROM slash

For those with a yearning to move over to CD so that productivity CDs and CD32 games can be become a part of their computing, the Zappo CD-ROM drive has received a rather substantial price cut of £40. The unit can now be picked up for £159.99 and features the latest software to aid CD32 compatibility.

For more details, contact Don Carter on 01543 419999.

Software upgrade

No sooner have Gordon Hardwood Computer's released version two software for the ProGrab 24RT, version 2.5 is now upon us. Featuring additional file format support, image processing effects (emboss, convolution, oil paint and many more), palette computing routines and dithering form the main basis of the upgrade and can be obtained from Harwoods on 01773 831040.

A sonnet for the Amiga

Hot on the heels of the scorchingly fast Cyberstorm 060 card, the Sonnet 50MHz Doubler 4000TM is a daughter board that plugs into the 4000's CPU socket. The distributors, Blittersoft, claim the card delivers across-the-board speed increases for all applications and system functions.

Featuring an on-chip cache and maths co-processor, the chip costs £399.95 and can be obtained form Paul Le Surf on 01908 261466.

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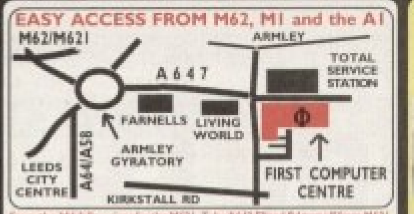
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From the M1 follow signs for the M621. Take A643 Elland Rd turnoff from M621. Follow signs for A58. This merges with Armley gyratory.
From the A1 take the turnoff for the A64. This merges with the A58 (by-passing Leeds town centre) which meets the Armley gyratory.

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3.5" Hard Disk Drives with A1200/600 install kit

(We recommend 3.5" drives be fitted by fully qualified computer engineers)

inc. software, cables and instructions

260Mb..£154.99 420Mb...£169.99
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S-Video, and composite compatible

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Tabby



The amazing new graphics tablet for the Amiga developed with the help of First Computers. 94% rated in Amiga Shopper. Requires 2.04 WB or above.

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Compact Portable mono printer, 30 page ASF built in.

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Stunning affordable colour thermal transfer printer, low running costs, 3 p/p/m mono, 1.4 p/p/m colour.

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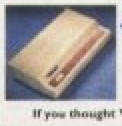
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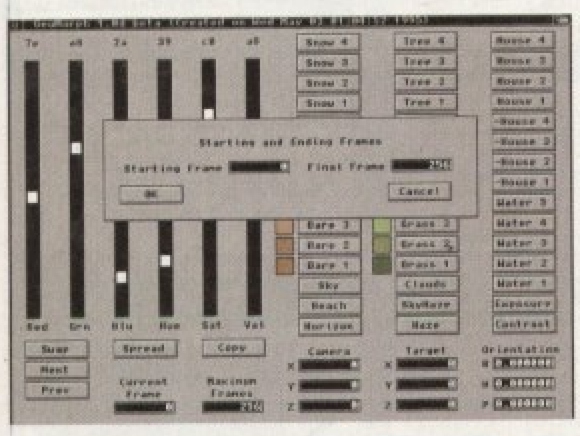
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Reality bites

USA news

Yet more news from across the pond, courtesy of Denny Atkin

If you've worried that Virtual Reality Labs, Inc.'s success in the PC market might mean the end of the company's Amiga support, you can end your fears. VRLI has contracted with Chaocity to maintain, enhance, and market their Amiga line of software. Chaocity is run by Clint Woeltjen, one of the principle developers of the Amiga version of VistaPro. Chaocity's first new Amiga product is GeoMorph, a program which reads VistaPro DEM-format landscape files and MakePath scripts and produces sequences of VistaPro DEMs, and a VistaPro script which gradually morphs one landscape into another. Also, tree growth and density, tree level, snow level, sea level, and haze density can be controlled across the animation.



Landscape colours can be changed independently of other morphing. Multiple morphs can occur within a single script, and multiple scripts can be pasted together. You should be able to use GeoMorph to create some dramatic effects, whether morphing from a before to an after picture of the Mt. St. Helens explosion or animating the genesis of Earth.

The next product from Chaocity, coming later this year, is GeoForge, which will let you go a step further and design your own landscapes. For more information, contact Chaocity, 221 Town Center West #259, Santa Maria, California 93454; phone (805) 925-7732; fax (805) 828-3128.

Emplant PC on hold

If you purchased the initial release of the e586DX PC emulation module for Utilities Unlimited's Emplant board, you were probably shocked at its poor performance and its inability to run any Windows release greater than 3.0. In mid-April, Utilities Unlimited's Jim Drew responded to customer complaints on the GEnie online network.

"About three weeks ago, we discontinued work on the Amiga version of Emplant's e586DX emulation module," Drew says. "We have been working on the PowerPC version only. In the last few days we have ported back the PowerPC assembly code to 680x0, which has resulted in an emulation that corrects the MMU problems associated with some versions of Windows and some memory extenders. The code is 750K smaller, and is 20-200 per cent faster than the v1.1 version (without CPU transcription). This emulation is completely different code from the previous Amiga version."

Drew says that the back-ported code is being worked on, but wouldn't give a release date. "The only way we can continue to provide new products and support for the Amiga community is to expand into other markets," he explained. "Our first order for 'PowerCLONE' (the PowerPC version of our e586DX emulation) exceeded our gross revenue since we got into the Amiga market place (in 1989), something we can not ignore."

While the users who have shelled out $99 for an emulator that doesn't do much more than run the DOS version of WordPerfect are obviously distraught, it pays to remember that the original version of the Emplant Macintosh emulation also barely worked. Hopefully, Drew and company will repeat history and end up providing us with a PC emulator that works as well as the Mac Emplant works now.

Aladdin's out of the bottle

While you wait for PC emulation to be perfected, you can spend your time building virtual worlds with a product from a company that remains dedicated exclusively to Amiga products. Adspec's Aladdin4D version 4.0 is dramatically enhanced from earlier versions of the 3D rendering program, adding user-requested configurability and a host of new features. Despite all of this, the company has been able to lower the product's price.

The revamped 3D user interface supports the standard ScreenModes requester, so you can now choose which graphic mode to edit and preview your work in – and you can also use third-party displays like the Picasso II.

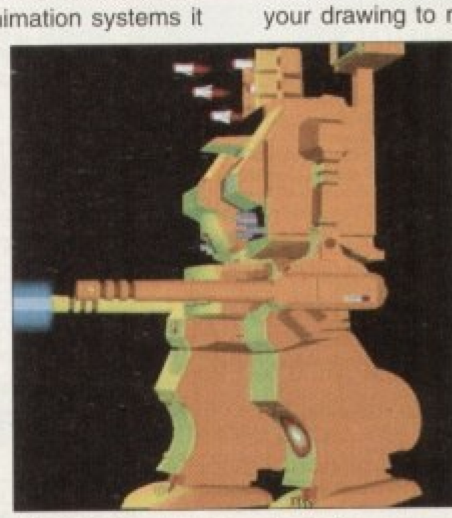
Perhaps the most significant feature for folks sending animations out to video is Field Rendering. This emulates the interlaced scanning of real video cameras, and can make for incredibly smooth animation displays. Adspec say their field rendering takes no longer than standard rendering; on some competing animation systems it can double the time needed to create an anim.

Image size and screen size are no longer synonymous, so you can create letterbox animations. If you're using gas effects, you can now move the camera into the gas, making for some dramatic views. Multiple selections have been improved, and anim requesters can be more easily reached from different parts of the program.

Flares and Fountains can now be either added for star and flame effects, or set for a new transparent mode. This allows you to use them for some outstanding confetti effects. Transparency can be set to achieve anything from barely there, to cellophane effects, to completely opaque, and black flares and fountains are now possible! You can also use the Alpha channel type in the texture list to control the shape and transparency of the flare and fountain images. Flares and Fountains also render significantly faster.

With the new batch rendering mode, you choose the drawings you want to render and set the target file names. Aladdin4D will load each drawing in the list and render it, one after the other, until it finishes or you tell it to stop. Drawings and render files may be spread among multiple devices and can be in multiple screen modes.

There are many other new features, including external operators, a faster shading tool, and an interactive bevel tool. You can even add notes in your drawing to reference why you did particular things to objects.

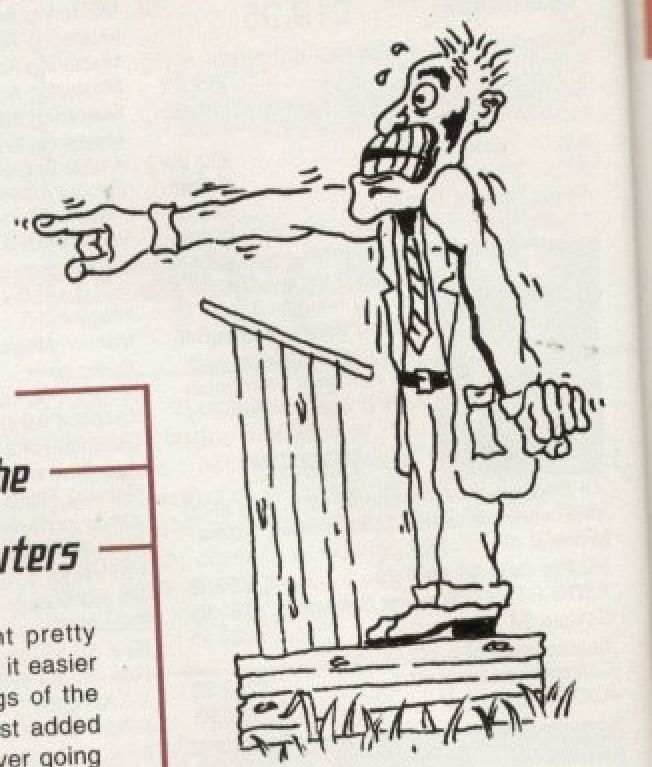


Aladdin 4D version 4.o, offers an alternative to 3D renderers

The program requires 4Mb and a maths co-processor. Upgrades from earlier versions and from Draw 4D Pro start at $119.50 plus shipping, and new users can purchase the program for $229.50 plus shipping. You can order with a MasterCard or Visa by calling (216) 223-2255. For more information, call (216) 337-3325 between 11am and 2pm EST (five hours earlier than GMT), or write Adspec Programming, PO Box 13, Salem, OH 44460 USA.

A time for GUIs

New boy Ben Vost has been thinking about the way we use our computers



A long time ago, James Watt invented the steam engine. But even in those Internet-less days of no communication between scientists, all working independently on their own projects, there was a pretender to the throne. Someone else stood up and said: "It was me, I invented the steam engine." And later, just before the turn of the century, bitter rivalry broke out between two men an ocean apart over who was first with the electric light bulb. Was it Edison? Was it Swann? Do we really care?

The point that many philosophers have made is that it was time for the steam engine, so someone invented it. It was time for the lightbulb, so that was brought into being too. It's always happening, people around the world simultaneously, and independently, working on the same notion.

NEW INVENTIONS

We've had personal computers for between 10 and 12 years now, so maybe it's time for someone to 'invent' the graphical user interface. I can hear shouts from the back saying that the scientists at Palo Alto invented it in 1976, but that's not enough. We have had 10 years of trying to get to grips with computers and we have learnt to do so, but there are going to be a whole new generation of computer users and, more importantly, programmers, who never had to struggle with Sinclair BASIC or MS-DOS, let alone Workbench 1.3.

There is always going to be a place for the sort of beardie weirdie who knows Unix like the back of his hand, but the future user of computers is going to want to access the information held within, and out of, them as easily as she can use a TV. This process has already started.

> Soon, when object-oriented programming has reached a greater level of maturity, we will be finding ourselves only buying modules to add onto our existing system without needing to buy complete applications all the time

Look at some of the software you have on your hard disk right now, then compare it to what you had, say, three years ago. Think about WordPerfect Amiga 4.1, then think about Final Writer. See what I mean? And the current Final Writer is going to seem like a dinosaur in years to come. It's not just that we want pretty interfaces, although they do make it easier to bear some of the shortcomings of the software at times, and it's not just added features; after all, how are you ever going to use all that clip art, all those fonts, all those words in the dictionary and thesaurus.

It's about making those things freely available for you to use. Now, if you choose the keyboard shortcuts – <right Amiga> Q, X, C or V – you can be pretty sure you are going to quit, cut, copy or paste. And this consistency is important. It means you will spend less time acclimatising yourself to the software, and more in actually putting it to use.

Programmers are getting used to the idea that they don't have to re-invent the wheel with each program they create. Let someone else take the strain of making loaders for different file formats, or screen gadgets for a colour palette. Soon, when object-oriented programming has reached a greater level of maturity, we will be finding ourselves only buying modules to add onto our existing system without needing to buy complete applications all the time.

We might buy a dictionary module to go with our text editor module and our page layout module, and voilà, a DTP package is born of discrete parts. It will happen – it's already started. But change should not be made just because it can be. There is a driving force for progress, but let's not get carried away with new features until we can make sure that the old ones are working in the best possible way. This way to the future, all aboard now.

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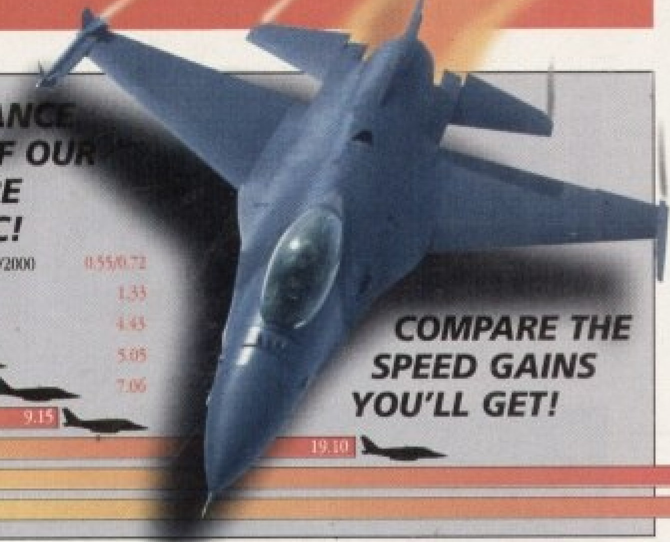
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A1200 with 1230-III, 50MHz, 4Mb	9.15
Standard A4000/'040	19.10
A4000 with Cyberstorm'040 - 40MHz	30.22
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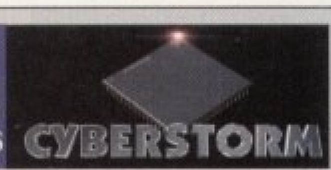
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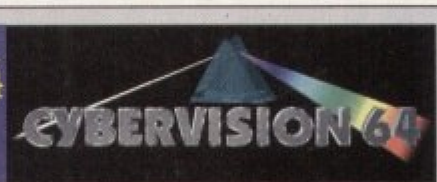
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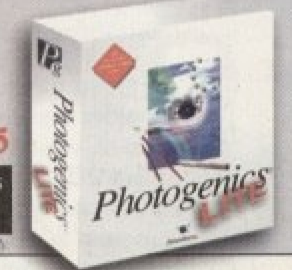
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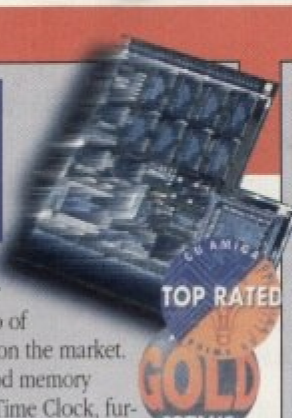
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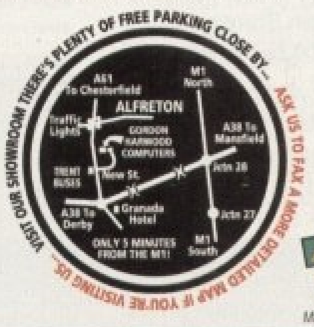
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THE Cover

It's a kind

Before you begin

Before you even think of clicking on those dinky little square icons in order to extract those cool utilities on CoverDisk 2, you had better click on that big icon called Extract_Me_First. Doing this will extract the Installer file and copy it and the LHA program to your C: directory. You will need to have at least 170k free on your boot disk for these files to fit. You have been warned.

You will then be able to simply double-click on the appropriate icons, which will result in the files being extracted to your RAM disk. After they have been extracted, they can then be installed to a floppy disk or directly onto your hard disk. Remember to delete the files from RAM once you have installed them to your preferred destinations or they'll just take up valuable memory.

Also, beginners should be aware that some of the files are CLI commands which don't have icons. You must therefore ensure that you have 'Show all files' activated from the Window menu, otherwise you won't be able to see the files if you intend to copy them by dragging them to a destination.

Remember, also, that all the utilities here are accompanied by documentation files which explain the various features and functions in greater detail than can be covered in the disk pages. So, if you're having problems or simply wish to know more about these great utilities, check the documentation files

Magic User Interface

Author: Stefan Stuntz
Workbench: 2.04 or higher

Stefan Stuntz's Magic User Interface is a program which lets you edit the look of any programs that use it. Programs like AMosaic and DMS-Face can't be used without MUI, so it's a good job we've got the complete registered version on this month's CoverDisk. Double-clicking on the Extract_MUI icon will result in a drawer called MUI being extracted to your RAM disk.

MUI is a large application and readers without a hard drive shouldn't even bother extracting the files. In addition, because MUI is such a large application, you will need a machine with at least 2Mb to be able to extract the archive to RAM:. If you don't have that much memory, you will need to edit the "Extract_MUI" file and change the line:

```
c:lha x MUI23AC.lha RAM:
```

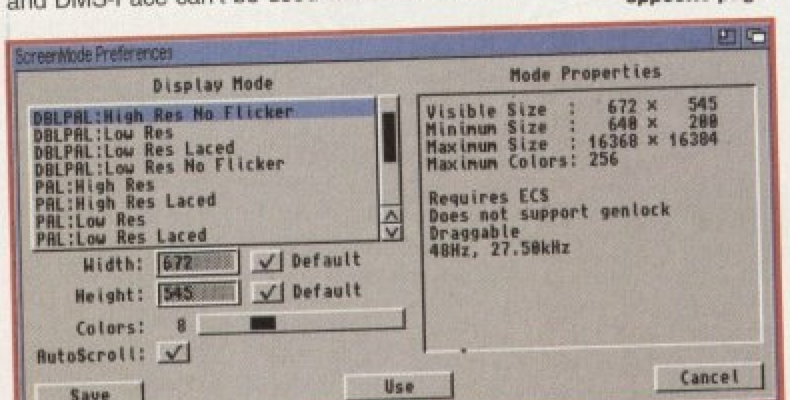
to:

```
c:lha x MUI23AC.lha XXX:
```

where XXX: is whatever your hard drive partition is called.



Using MUI Prefs, you can completely change the way your applications look



Compare this standard Amiga-looking window with that on the opposite page

DMS-Face

Author: Øyvind Falch
Workbench: 2.04 or higher

Ever tried to use DMS? Isn't it a pain? It's even worse than trying to get LHA to work. But now there is a nice MUI GUI (don't you just love all these acronyms?) for it to make things so much simpler. DMS-Face is so user-friendly it even comes with a standard installer script.

AmosMui

Author: Paul Hickman
Workbench: 2.04 or higher

Amos Mui is a set of extensions to the extremely popular AMOS Pro BASIC language environment. Obviously, you will need to have a copy of AMOS Pro to make use of this program.

FalconMath

Author: Simon Forey
Workbench: 2.04 or higher

Just to give you a mix of MUI stuff, here's an algebraic equation editor that uses MUI. If you are the sort of egghead that actually knows what an algebraic equation is, then FalconMath is the puppy for you.

MUI Empire

Author: Karl Bellve
Workbench: 2.04 or higher

Just to prove that MUI isn't all technical, utility-type stuff, here's a strategy game completely programmed using MUI. Being a starfleet management game, there aren't any pretty graphics, but that doesn't detract from its gameplay.

MUI Screenmode

Author: Cyril Deble
Workbench: 2.04 or higher

Our Cyril's a French chap and he decided that the standard Workbench screenmode preferences editor was a bit bland and boring. So he undertook a project to revamp it and came up with this little gem. Cyril's screenmode editor is so flexible, it can even allow you to select HAM screenmodes.

Cyril says that his next conversion is going to be the Locale preferences editor, so you could say that it's today the screen, tomorrow the world...

...rDisks

...d of magic

This month's CoverDisks are going to transform the way your Amiga Workbench looks and performs. Check out the awesome Magic User Interface and the utilities which make using your Amiga much easier



Utility Heaven

AddressManager

Author: Michael Schikora
Workbench: 2.04 or higher

AddressManager is one of the nicest address book programs available for the Amiga. With the ability to search for someone on any field and printing facilities that would not look out of place in a commercial package, AddressManager is a great addition to anybody's list of utilities.

MUI Speak

Author: Andreas Jung
Workbench: 2.04 or higher

This is a tool built with another excellent MUI package – one which, unfortunately, is too big to go onto our disks this month – called MUI Builder. MUI Builder lets you concentrate on what your interface looks like, then goes away and generates the code for that interface. MUI Builder comes with built-in support for C and E, among others, but there are external modules for the support of other languages.

MUI Speak is a replacement for the Speechtoy program on the Workbench 2.04 disks and as such requires the 'translator.library' file in libs:. Workbench versions after 2.05 don't come with this file, so you will need to get it from somewhere.

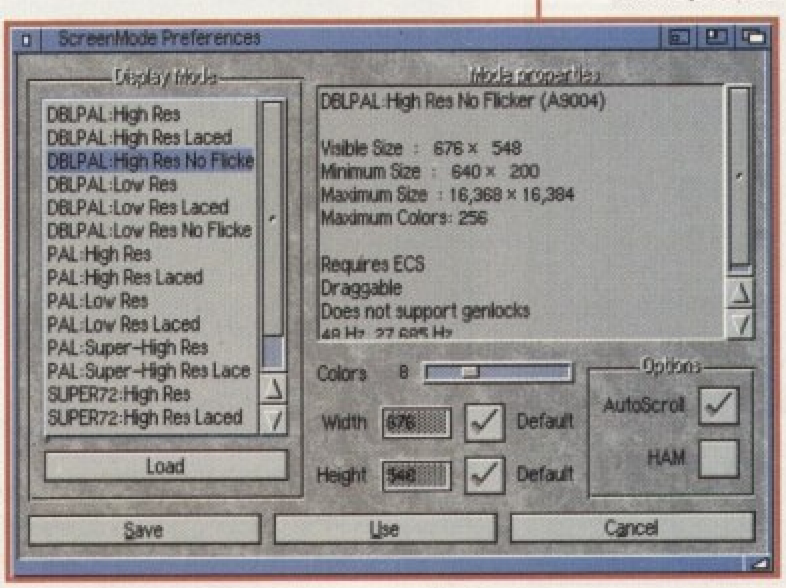
MUI Speak also comes with its own überstetzer library (übersetzer means translator in German) to make the Amiga's speech sound like a German adenoidal dalek with its head in a bucket, rather than an Australian one. Just like any other MUI package, you can change the way the interface looks to your heart's content.

MUI Env

Author: Michael Suelmann
Workbench: 2.04 or higher

MUI Env is a very useful gizmo for people who set a lot of environment variables every time they boot their machine. It lets you view your env: or envarc: directories and their sub-directories, create new variables or directories, and edit your current settings.

Spot the major difference between this Screen Prefs and the previous



Magic Menu

Author: Martin Korndörfer
Workbench: 2.04 or higher

Are you fed up with the rather boring look of Intuition's menus. Oh yes, they work perfectly well, but there's room for improvement in the aesthetics department isn't there?

Well, this is where Magic Menu steps in to dress things up a little as well as enhancing functionality too. Once installed and running, Magic Menu transforms the look and operation of the tacky white menu bar at the top of our beloved Amiga screens.

Some of the visual improvements on offer include a cool 3D look, complete with optional borders. On the functionality side, you can configure the way the menus are accessed.

As well as standard access mode – where you have to hold the right mouse button down to activate the menu, then release the right mouse button with the pointer over a menu item to select it – you also have Press once and Select modes.

Press once allows you to simply press the right mouse button once to activate the menu bar, without the need to hold it down to keep the menu bar active. Moving the mouse pointer over the various menu titles brings up the respective menu items which are also highlighted as the mouse pointer moves over them. You then simply click a menu item to select it.

Select mode brings up the menu with a single right mouse click and then requires you to actually click on each menu title to bring up the menu items.

Magic Menu also has a neat keyboard facility for accessing the menu bar and its items – useful if you find yourself suffering from a dead mouse. But Magic Menu's main feature is that it frees you from having to move the mouse to the top of the screen all the time, because Magic Menu lets you hit the right mouse button anywhere on the screen to bring up the menus.

Magic Menu is best placed in the WBStartup drawer so that it activates automatically at boot up. Once running, you should find your menu life that much classier.

➤

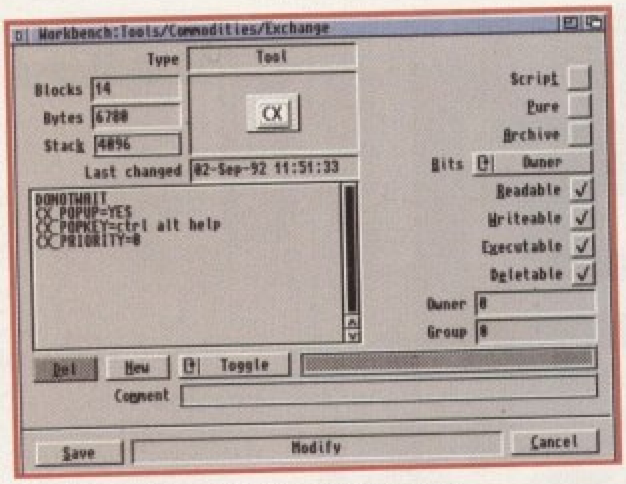
CacheFont

Author: Adam Dawes
Workbench: 2 or higher

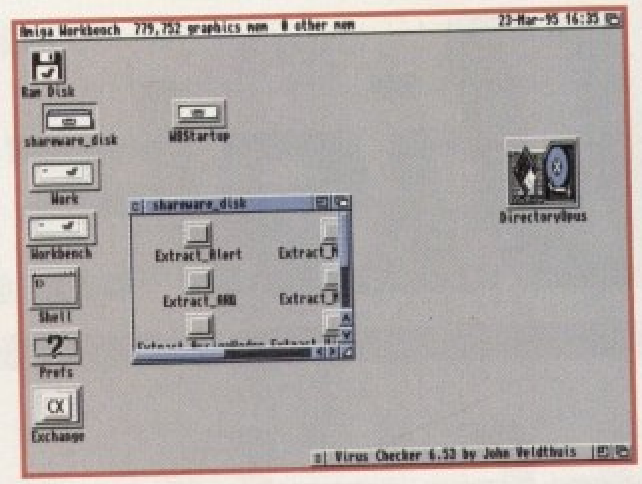
For those of you who have a healthy collection of fonts stored in the old Fonts drawer (DTP users in particular), you know how slow and irritating it is when a program has to read the fonts prior to displaying them. And if there's a lot of them, things tend to become tedious.

CacheFont injects a major speed increase into this operation by first creating a fonts list which CacheFont then refers to. Once installed, any access to the fonts is extremely quick and efficient. You will wonder how you ever did without it.

Installing CacheFont requires you to place CacheFont and MakeFontList in the C drawer. You must first run MakeFontList in order to create the font file CacheFont will use. You can then either run CacheFont manually, or place a call to it in the user-startup script in the S drawer.



SwazInfo replaces the standard Workbench Information facility with a much more powerful version featuring a drag and drop ability



Notice the time and date display at the top-right of the screen. This is provided by Title Clock

Virus Checker

Author: John Veldthuis
Workbench: 2.0 or higher

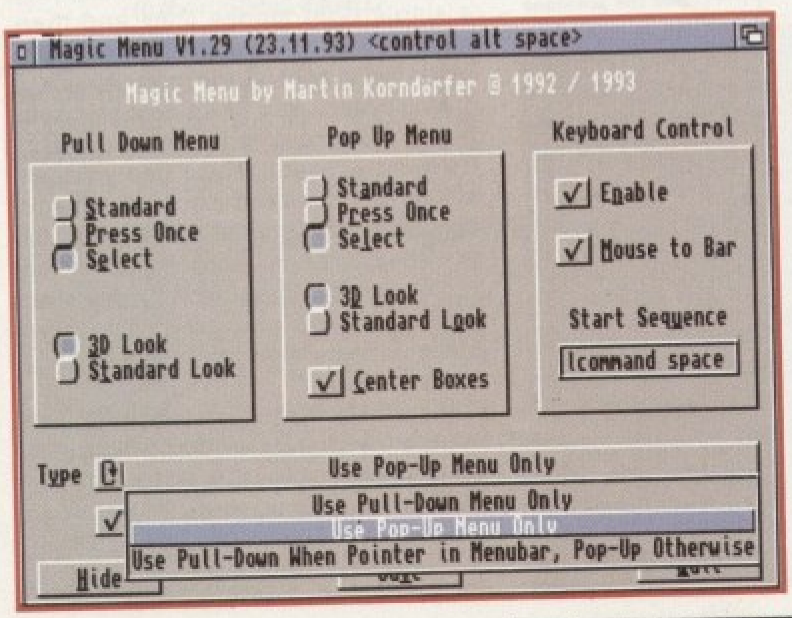
The threat of a virus is one which all computer users, both big and small, have to be aware of. These small nasty little blighters, written by equally small minded nasty little people, can find their way onto floppy disks and hard drives and do untold damage in a variety of different ways.

Of course, there are various virus killers on the market, but there are few which are as powerful and versatile as Virus Checker, including some commercially available packages. Once installed, Virus Checker searches your Amiga's memory for any dubious programs lurking in RAM. After that, Virus Checker lies in wait, keeping tabs on any disks inserted to see if they are clean – if not, Virus Checker let's you know.

Of course, virus killers are only as good as the library of virus programs they recognise. For instance, if a virus killer doesn't recognise a boot sector on a floppy disk, it will flag it as suspect. Now, this doesn't do your peace of mind any good. It may well be that the boot sector is safe and that it merely contains some code essential for the program on the disk to run, such as game disks.

However, it could be a new virus that the virus killer doesn't know about. Virus Checker gets around this by utilising an external library file of all known viruses it uses when comparing strange data found on a disk. This file is constantly being updated as new viruses are found and means you only need to get hold of the new file instead of updating the entire virus killer program.

To install Virus Checker, simply click on the InstallVC icon and follow the installation programs instructions.



This neat utility turns cycle gadgets within programs into pop-up lists for faster and easier access.

Alert Display Replacement

Author: Martin Mares
Workbench: 2.04 or higher

We've all had those dreaded guru alert messages thrown at us by our Amiga at some time or another. Unfortunately, these so-called messages displayed on our screens might as well be a hitherto unknown form of ancient hieroglyphics – they don't exactly tell you much about what went wrong.

This neat utility helps make things a little clearer by adding a little more information to the error message when it occurs. This information includes the name of the program which caused the alert, as well as a more comprehensive text description of the error.

To install the Alert Display Replacement, copy AddModule and NewAlertHook to the C drawer. Then using the CLI, enter:

```
addmodule c:newalerthook INIT
```

Arq

Author: Martin Laubach
Workbench: 2.0 or higher

Requesters. Those little windows of wisdom which appear, quite often before an unrecoverable operation such as deleting or formatting devices.

Although they do the job of asking for confirmation, they are a little irritating because the buttons, which are usually an OK or Cancel affair, have to be clicked on with the mouse.

It would be nice if they were dressed up a little and were given keyboard shortcuts for any buttons they contain, wouldn't it? Arq does just that, adding useful keyboard shortcuts with a smattering of animation to make life a little more interesting. Simply drag the Arq icon into your WBStartup drawer so it is loaded automatically.

Assign Wedge

Author: Olaf 'Olsen' Barthel
Workbench: 2.04 or higher

This neat utility is good for situations where you find yourself or a program trying to access a volume name which hasn't been assigned. Instead of the usual 'Please insert volume ??? in any drive requester', Assign Wedge is called up, giving you some extra options to choose from.

The options include Retry, which you click on if you have manually taken care of the assignment, Assign, which lets you choose a drawer to assign to the name currently shown in the requester, Mount, if the name in the requester is a device you can mount it and try again, and Deny, which tries to deny the program from calling the device again.

Just drag the program icon to your WBStartup drawer and you're away.

Cycle to menu

Author: Frederico Giannici
Workbench: 2.0 or higher

Cycle gadgets are buttons which cycle through the various items in a list. However, if you have quite a few items to choose from in the list, it can be slightly irritating to have to scroll through the entire list one at a time per mouse click to get to the item you need.

Cycle to menu changes all that by transforming the cycle gadgets into pop-up menus which display all the items at once for you to choose from when you click on

the item name. For the die hards, clicking on the actual cycle symbol makes the gadget behave in the normal way.

MultiCX

Author: Martin Berndt
Workbench: 2.0 or higher

MultiCX is a multi function commodity with lots of features and functions – too many to list here so check out the documentation. Some of the features include a Screen blanker and mouse accelerator.

MultiCX must be started from the Workbench, as CLI or shell is not supported. The majority of MultiCX's features can be configured by altering certain parameters – you can do this by selecting the MultiCX icon and selecting Information, or you can use the MultiCX Prefs utility also included on the CoverDisk and described elsewhere on these pages.

MultiCX Prefs

Author: Michael Barsoom
Workbench: 2.0 or higher

This utility complements MultiCX. Changing the parameters of some of MultiCX's functions requires altering the tooltypes. MultiCX Prefs provides a more intuitive method utilising pop-up menus and slider bars.

MultiCX Prefs needs to know where you have MultiCX stashed on your drive and you can tell it by entering MultiCXPath = <path> as a tooltype or CLI argument.

SwazInfo

Author: David Swasbrook
Workbench: 2.0 or higher

SwazInfo replaces the Amiga's standard icon information feature offering major benefits and extra features. One of the most useful extras which SwazInfo offers is an excellent drag and drop facility.

This allows you to do such things as drag icons into the icon display window to assign it, or you can drag an icon to the tooltypes window and all tooltypes associated with that icon will be loaded into the tooltypes window. There is also the handy feature of assigning a default tool to the icon using a file requester instead of having to type the program directory and name manually.

Other cool features include the ability to toggle tooltypes between active and inactive states at the click of a button, instead of having to enclose the tooltype in brackets via the keyboard. In short, this is one utility you shouldn't be without if you find yourself regularly changing tooltypes. To install SwazInfo, simply click on the Install icon.

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TitleClock

Author: Anders Hammarquist
Workbench: 2.0 or higher

If you want to know the time, you don't have to ask a policeman, just put TitleClock in your WBStartup drawer and you have a neat clock in the top-right corner of the screen.

TitleClock can be configured via a number of tooltypes which allow you to change various parameters such as update speed, whether the date should be shown, what format the date should be in, and many others.

Datatypes

Author: Various
Workbench: 3.0 or higher

Datatypes is a feature of Workbench 3.0 and above which provides a method of enabling the Amiga to recognise and use alien file types. For example, the Multiview utility allows you to view IFF picture files as standard (as well as other different files such as text and sound files) – however, it doesn't let you view picture files in, say, Targa format.

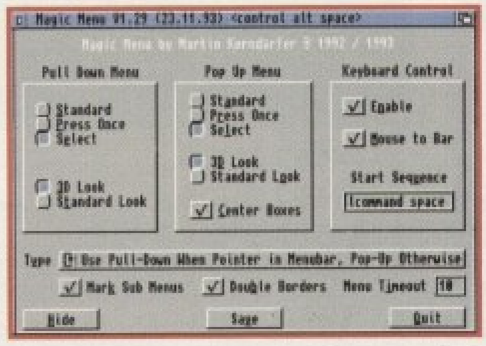
Thanks to Datatypes, it is possible to essentially tell the Amiga how to read these files by simply dragging the appropriate Targa datatype files to the datatypes drawers. The Amiga will then be able to understand Targa files.

There are a collection of datatypes for you to install. Some of them have their own install utility, which copies everything to the correct drawers for you, but some of them require you to do the copying yourself.

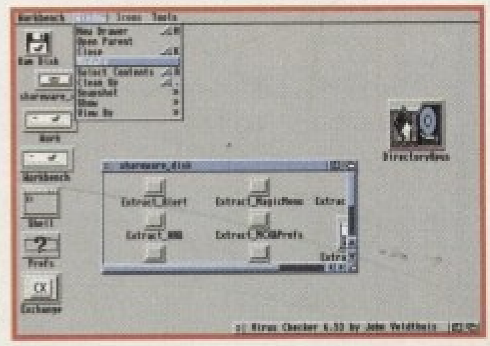
Refer to the associated documentation files for instructions on installation for such files.

Next month

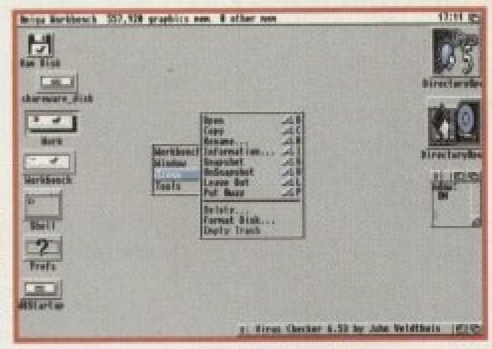
On next month's CoverDisks we have the complete Personal Paint 4 art package as well as more MUI applications. So make sure you don't miss out, – order your copy now or better still, why not subscribe and save money too?



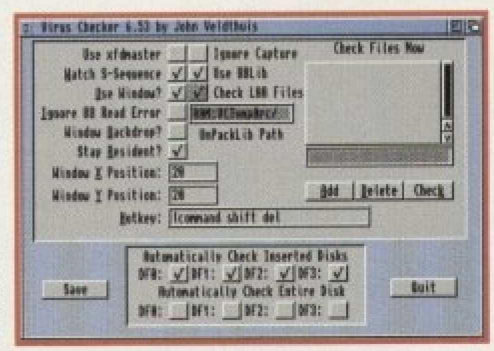
Magic Menu lets you alter the way your Amiga menus look and how they can be accessed



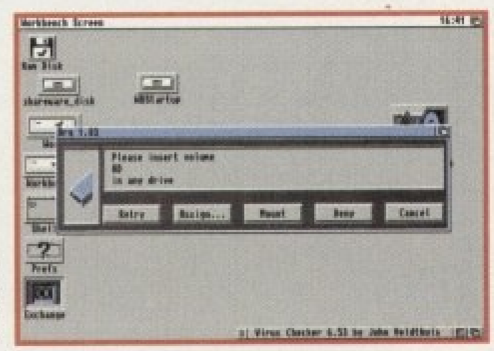
As you can see here, the Amiga menu bar has a much cooler 3D look to it



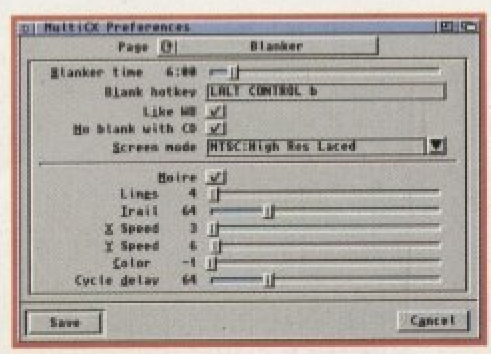
Magic Menu also provides a pop-up facility for accessing the menu from anywhere on the screen by clicking the right mouse button



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MultiCX provides you with a host of features which can be configured easily using MultiCX Prefs shown here

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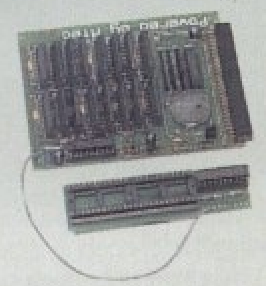
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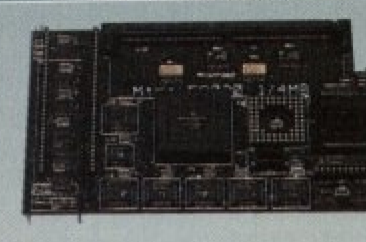
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Judgement day

Dan Stets reports from New York about the date we'd all being waiting for – the day Commodore was finally bought

David Pleasance looked glum. The bidding for the remains of Commodore International Ltd. had not even begun, but the management team from Commodore Business Machines UK was throwing in the towel.

"We can't compete with Escom and Dell," said Pleasance. "We are going to try to settle with whoever wins."

Commodore, once a world leader in the production of home computers, had been reduced to corporate corpse. Circling in those law offices were small groups of men in dark suits, picking at the remains. They were hoping to revive a pulse – the company's name which once stood for innovation and quality at prices affordable to the average consumer.

For months there had been speculation about who would wind up with Commodore and what they would pay. Commodore's UK subsidiary had been among the most prominent suitors, as had Creative Equipment International of Miami, the largest Commodore distributor in North America. Other names emerged and faded. Amstrad, Philips, Samsung. Estimates of the sales price ran to more than $20 million. The company's American creditors, owed more than $100 million, were keen to get as much back as possible.

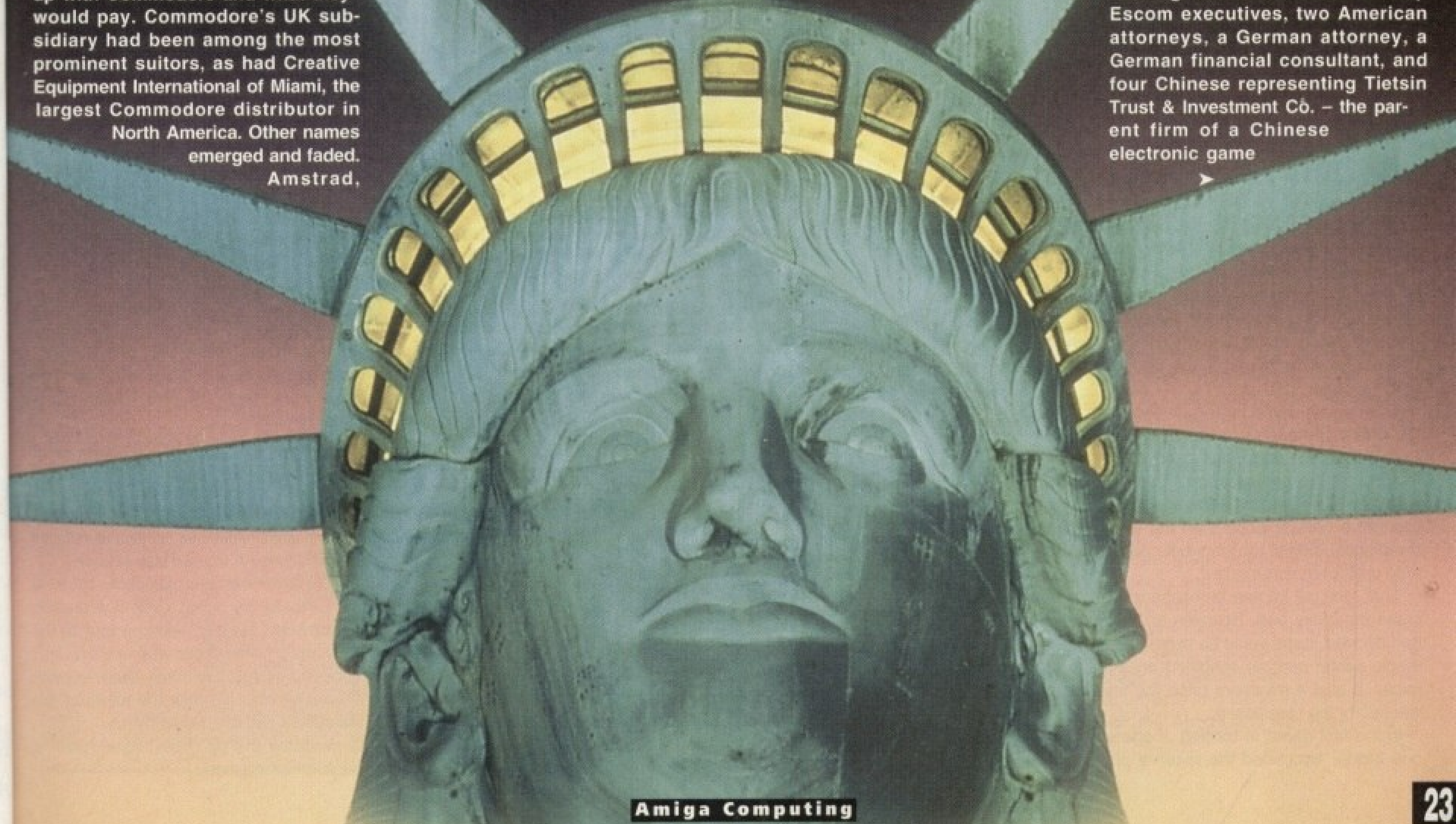
The American creditor had resisted allowing the bankruptcy to go ahead in the Bahamas as they were sceptical that Bahamian law would protect their interests. After months of bickering, a joint approach was agreed upon, allowing a blend of US and Bahamian law.

The Bahamian liquidators would sign a sales agreement with one potential buyer and then an auction would be held to convince American creditors they had got the best price. The first buyer would be a stalking horse. It was assumed the first price would be no more than an opening bid. Others would surely top it.

Escom AG, Germany's second largest computer company, became the stalking horse. The company, which had offered $12 million for Commodore in September, agreed six months later to pay only $5 million, in addition to $1.6 million – already paid to a German bankruptcy trustee for the right to use the Commodore trademark in Germany, one of Commodore's best markets. As events unfolded in New York on 20 April, it was clear the Escom offer was worth much less – only $3.5 million for the company's core assets. There was another $500,000 in the price for the UK assets and $1 million for the manufacturing inventory in the Philippines, but the Bahamian liquidators were not in a position to guarantee delivery of either of those. Jurisdiction was claimed by a Dutch liquidator conducting his own proceedings.

Escom came to the auction with a small army led by company president Manfred Schmitt, who owns 51 percent of the firm's assets. Schmitt is a tall, lean, sandy-haired, boyish but stern looking 44-year-old. He was in a white shirt, silvery tie, and a black suit so well tailored it seemed he might have been born in it and it grew with him.

Along with Schmitt were two top Escom executives, two American attorneys, a German attorney, a German financial consultant, and four Chinese representing Tietsin Trust & Investment Co. – the parent firm of a Chinese electronic game ➤



company. If Escom were successful in the bidding, the Chinese had agreed to build all the Commodore products at a factory outside Beijing.

The UK effort was represented by Pleasance and the subsidiary's other managing partner, Colin Proudfoot. Alex Amor, president of Creative Equipment, arrived with a tall, dark-haired female assistant.

As the hour approached for the auction to begin, the dark suits which had been pacing the corridors crowded at the one long table and in chairs around a conference room. The Tientsin team had been seated for an hour. Amor and his assistant had a place at the table.

Next to Amor was a new figure in the drama, Dalton Kaye, Dell Computer Co.'s vice president and treasurer. Dell, a Texas maker of IBM-compatible computers, were suddenly interested in Commodore, but Kaye never would spell out just what the interest was. It was clear Dell were allied with Amor, who had tried for months to get IBM to back him, because he wanted to salvage his efforts with another American computer company.

Also around the table were representatives of several small and obscure American technology companies, but about half the places were taken by lawyers representing Commodore creditors and the liquidators, as well as the lead liquidator, Franklyn R Wilson, an accountant for Deloitte & Touche, who in the midst of the liquidation proceedings had set up his own firm, F R Wilson and Co.

There were more than 65 people in the room in all, a standing room crowd. Incongruously, among those left standing were Schmitt and most of the Escom team.

STARTING POINT

The proceedings were supposed to begin at 10 am. As lead lawyer for the liquidators, William J Rochelle III, the pin-striped essence of an American preppy earning at least six-figures a year, opened the meeting, asking for names and explaining the process.

Proudfoot asked to speak. He said Commodore UK was out of the bidding, but that the equity of the UK subsidiary was up for sale. He promised there would be tax advantages for whoever bought the concern.

Then the problems began. Rochelle and Steven Richmond, lawyer for the creditors, had set up a bidding process the likes of which no one had ever heard of, and the details of which had not been contained in the announcement of the auction.

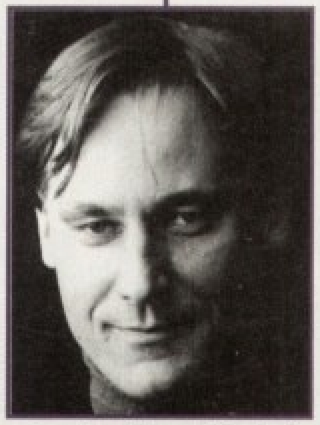
The auction would be held in two parts, with the entire company – or at least that part of Commodore the liquidators could deliver – put to the bidding process first. Then the parts would be auctioned off separately. If the parts brought a greater price than the whole, then the highest bidder for the whole could up the anté until a winner emerged.

That was all known beforehand, but then came the tricky part. Rochelle and Richmond had decided there would be 'a reserve price,' a magic secret number scribbled on a piece of paper. It was a minimum price the liquidators wanted for the core assets.

In the first round of bidding, if one and only one bidder exceeded the reserve price, that bidder would be the winner of all the assets. The idea was to pump up the price on the first round. If more than one bidder exceeded the reserve price, then they – and only they – would be allowed to bid in the next round.

> Even before the court reconvened, Amor announced his defeat. "I guess we'll sell flowers" he said. His support for Dell had earned the animosity of the Escom representatives

Escom would have to submit a bid, in effect bidding against itself, to ensure it stayed in the competition to the end. Carlene Gatting, lawyer for Escom, objected. She and Richmond, a burly Boston lawyer, squabbled on several points of procedure. Escom reserved the right to object to the whole process.



Founder of Escom, Manfred Schmitt told Frankyln Wilson, the liquidator after the first day: "It was unfair what you did here."

After three hours, Rochelle finally managed to hand out bidding forms, single pieces of paper calling for two numbers – one price for the core assets and another for everything else. Representatives of seven firms raised their hands requesting forms.

A period of muttering and scribbling ensued. There was a break for lunch, and then at 2pm Rochelle collected the forms. To his obvious consternation, only three firms returned bids. The liquidator, Wilson, began to look nervous.

The bidders were Escom, Dell and an obscure Commodore distributor from California, Computer Connection. There was then another break as the liquidator and lawyers evaluated the bids.

A shaken Rochelle announced the results. Computer Connection's bid was invalid because it was not accompanied by the required $1 million deposit. Dell's bid also was invalid because it had been conditional – the conditions were not then specified. Escom seemed to be the winner with its original proposal, $3.5 million for the core assets.

There was another pause as the lawyers met with Kaye of Dell to discuss his conditions. Finally, Rochelle had to declare Escom winner of the auction. No one wanted to bid separately for Commodore's parts.

In a bit of gallow's humour, Rochelle joked that he had never seen so many people show up for an auction and prepared to pay so little.

Schmitt, who had been quiet throughout the day, had one comment for Wilson as he left the conference room: "It was unfair what you did here." But the young German had not yet seen the worst of it. As the room emptied, Wilson was already talking with Kaye. And then the lawyers began talking to him.

As Wilson would describe it later, the real auction had just begun. The meetings with Kaye lasted until just before midnight when Dell finally agreed to pay $15 million for Commodore, including $13 million for the core assets, another $1 million for Dutch and UK assets, and $1 million for the Philippines inventory.

A hearing to approve the sale had been set for the next morning in a US Bankruptcy Court down in Manhattan's financial district – it was clear something was afoot. The Escom troops, who had managed at least faint smiles after the auction, were stern once again.

Richmond asked Judge James L Garrity Jr. for permission to speak. He announced that the creditors would oppose the sale to Escom at the original offer price, which he called "shockingly low, grossly inadequate."

He said a better offer was on the table from Dell, with a condition that was acceptable to the creditors. Dell wanted a month to evaluate Commodore's assets and had agreed to pay a $1 million non-refundable deposit to buy that time.

More than an hour of debate followed. The issue was whether the judge had the right to reject the price produced at the auction. But Richmond had offered an alternative. The creditors would drop their objections if Escom would substantially up its bid for the core assets.

An hour-long lunch break was called. It stretched to two hours. The Escom group felt tricked, and they suspected a conspiracy aimed at driving up the price. Their lawyers assured them that such a thing was illegal, and therefore impossible, in an American court.

Neither Schmitt nor the rest of the Germans were really convinced. But they were stuck. They had big plans for Commodore. Resumed manufacturing of all Commodore products in China; manufacture of IBM-compatibles that would be sold under the Commodore name in European department stores; and a new PowerPC, an Apple clone, for the European market.

One of the Escom team explained the problem. Schmitt didn't really understand Commodore or its products all that well. He was being driven along by former Commodore employees who were now part of his management team, such as Bernard van Tienen, a former Commodore VP who was in charge of world-wide distribution for Escom. These former Commodore troops, more than 100 in all, wanted the Commodore assets badly.

Schmitt would have to take a leap of faith. He would have to spend more money for the assets and then be left with less money for the serious business ahead, an expensive marketing program to polish Commodore's tarnished image.

He decided to take the chance, agreeing to up Escom's bid for the core assets to $10 million – an increase of $6.5 million. Richmond, really not sure whether the creditors would ever see Dell's $15 million, quickly accepted.

Even before the court reconvened, Amor announced his defeat. He had backed a loser. "I guess we'll sell flowers," he said. His support for Dell had earned the animosity of the Escom representatives, who had refused to talk with him over the two-day auction.

The UK team was in a decidedly different position. Pleasance hadn't even bothered to attend the court hearing, taking a tour of the city instead. But Proudfoot was in there until the very end. He quickly made plans to meet with Van Tienen to discuss the future of the UK subsidiary and its 22 employees.

He predicted the UK team would have "a good future" with Escom.

About time too...

We ask the winner and losers after that fateful day about their views and plans for the future. Adam Phillips reports



In the eyes of everyday business, the Commodore story is a mere blip of insignificance as yet another company that bit the bullet had a wretched, strung out liquidation process. To the people who care, though, the recent buyout now means that one of the computer industry's most popular machines has a chance to make its presence felt in the international scene as it has in the past.

What follows are a series of interviews with, and details on, some of the key players over the last year. Whether winners or losers, most have had to put up with constant setbacks and delays along the road to keeping the Amiga alive and kicking.

The victor – Escom

After dropping out of the spotlight a few months ago and letting CEI and Commodore UK grab the headlines with their fighting talk, Escom produced the trump card on 20 April, buying out Commodore's intellectual properties, technologies, trademarks and patents.

Bernard van Tienen, an ex-vice president of Commodore and now managing director of Escom Holland, commented on the auction and their philosophy: "We are a company of action – we do things, we don't sit around and talk about them... as for the auctioning process, it's very different to what we're used to in Europe, but I think at the end of the day everyone came out of the proceedings happy with the way it had gone."

While the Amiga industry and users breath a sigh of relief that the business of bankruptcy is over, the previously-felt anxiety has been replaced by a mixture of anticipation of better things and a few niggling worries – Escom may have a money pit the size of the Bundersbank, but what are they going to do to that darling of the computer industry, the Amiga. To quell any fears, or even worse, the rumour mill, Escom have taken the wise step of laying out a general plan for the future use of the Commodore trademark and assorted technologies. The most immediate question on everyone's lips is the production of new Amigas – Escom have confirmed that they will be producing 600s, 1200s and 4000s again within the next three months or, by the very latest, October (see late breaking news story for more details).



Escom – the successful buyer of Commodore's intellectual properties, technologies, trademarks and patents. Founded in 1987 by Manfred Schmitt, it's the second largest European PC manufacturer. With a turnover of over $500 million a year and 750 stores across Europe, Escom are in a prime position to launch an Amiga comeback

Not only will Escom's 255 shops sell the Amiga, but any independent retailers are welcome to step back into selling the technology. The CD32 will be reappearing and Escom's Dr Wirsing, head of PR, has confirmed that there are plans for a 64-bit version of the console.

One surprise move that could drag money out of wallets as quickly as the Spaniards trawl fish from the sea is the news that the C64 will go back into production to be sold into the Chinese and East European markets. While the Western world crave for money-hungry Pentiums and Alpha Dec machines, China is a technological wilderness awaiting the arrival of an inexpensive computer.

CHINESE CREDENTIALS

The country is also playing a vital part in producing the Amiga. Chinese firm, Tianjin Family-Used Multimedia, has won the licence from Escom to produce and market the Amiga platform. Its credentials include being the largest producer of 16-bit games machines in China, with a market share of 80 per cent, and have an installed user base of one million consoles.

As for the Far East and US markets, Escom are currently in negotiations with major distributors for the Commodore licenses.

The other main financial magnet that pulled Escom into parting with its money, other than Commodore's established name, is the Amiga's multimedia capabilities. The company sees the machine as a key technology for private users in the future of the multimedia industry. To further their plans for the Amiga, the firm have aims to ➤



Escom currently have an on-line service on the Web for their German customers. An English translation should be appearing soon. Take a look at the sight by typing in: http://www.veronica.nl/escom/

integrate the technology of the machine with the PC by producing PC cards that emulate the multimedia functions of the Amiga, such as audio and video. To add to this, Escom are also planning an Amiga TV set-top box that they hope will form the basis for interactive television.

This plan has added muscle, as one of the major shareholders in the German-based company wants to make a move into the interactive television market – with Escom's wealth, it could be a force to make the Murdoch's of this world look over their shoulder while they squabble for the rights of Channel 5.

The impression that one gets from the firm is that they are considering anything at the moment – Power PCs and Macs with the Commodore logo slapped on them are both on the cards.

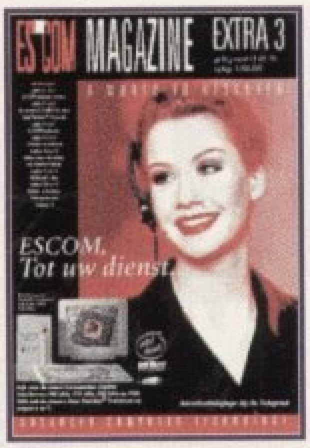
Escom's Bernard van Tienen is eager to point out that they are open to all ideas from people who know the Amiga industry inside out. Indeed, any fears that third-party hardware and software may be a problem have been quashed: "We're very open to third-party licensing" commented Tienan. "We see ourselves as a very open company"

EARLY NEGOTIATIONS

The firm are well aware that there are many loyal developers, public domain programmers and consumers – perhaps as a sign of Escom's commitment to the platform, they are already negotiating with Commodore ex-employees to bring them back on board. In fact, with an estimated 100 Commodore ex-employees working for Escom already, there's a real Amiga family buried away behind the previously PC-only company.

Support for consumers will hopefully be placed high on their agenda – they already have a homepage on the Internet for their German customers, and Tienen told *Amiga Computing* that this will be resurfacing in English at some point in the future, along with a possible magazine based round Escom's products and services.

With all this seemingly good news, the only remaining hurdle is the residual stock in the Philippines which is being held by the government. Rumour has it that it can only be sold to Escom, and industry insiders estimate that the inventory will go for $1 million at some point in the near future.

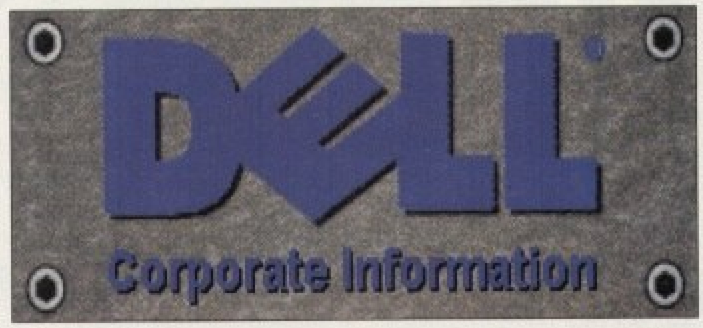


More customer support comes in the shape of a magazine detailing Escom's products and services



Escom's headquarters based in Germany. Escom UK are based in Irvine, Scotland and can be reached on 01294 222600

...and the casualties of corporate war



Dell after the auction: Still interested in buying certain patents from the Escom-owned Commodore portfolio

Ask many a magazine PC critic to name four top PC manufacturers and Dell are usually placed somewhere in the list. The company has been selling PC clones for several years and made $8 billion in sales in 1994.

When their bid came out of the blue on 20 April, there were plenty of surprised people – why had they done it? Michelle Moore, vice president of communications for Dell in the US, clarified matters for *Amiga Computing* – but not by much. "It actually came up quite suddenly here also... we had just heard about the auction and we saw an opportunity. We had a late breaking review of some of Commodore's intellectual properties and decided that while we weren't interested in the company per se, we possibly would be interested in acquiring some of its patents."

Which patents they were interested in was not revealed but, despite Escom's success, it would appear that Dell are now considering approaching the German-based company. "We are still interested in their patents portfolio and possibly acquiring part of that. Buying from Escom is a possibility and we're exploring our options in that area."

Despite Escom beating Dell to the jackpot, we may well see the Stateside company producing some Amiga-related products in the future. It's interesting to see how a machine that is regularly ridiculed by the PC business has managed to attract quite so much attention on a global scale – it can only be a good sign.

CEI

One of the most active bidders and main competitors to Commodore UK over the last year has been Creative Equipment International, based in Miami. Headed by Alex Amor, the company first came into the liquidating limelight when announcing it had a silent partner that would turn the Amiga into a household name – that company was IBM. Unfortunately for Amor this fell through, so CEI had to arrive at the auction day with only its own financing.

Amor is stoical about the day: "Obviously we're a little disappointed we were not successful, but it was a procedure that was agreed upon and it was carried forward and will move on... I believe that based on the procedures and what the judge decided, Escom have rightly got the technology."

PARTNERSHIPS

One of the surprise moves on the day was the hasty alliance drawn up with Dell: "Our relationship happened two to three weeks before the actual auction, and Dell was very aggressive and looked like a good partner to move the Amiga technology forward." Amor commented. "They came to the auction independently of us and it was decided that it was best to join efforts at that point in time."

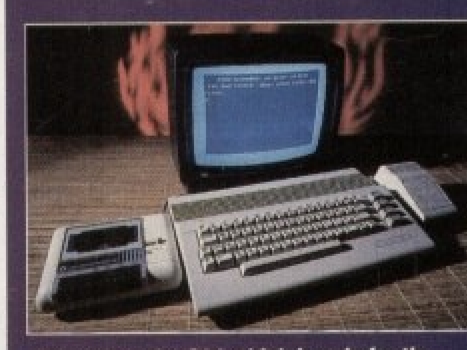
It would seem, though, that, like Dell, Escom's success has ultimately put CEI in a place to perhaps approach the German company at some point in the future for potential licensing: "At this particular juncture, the ball is in Escom's court – obviously, we understand where the Amiga needs to go and we'll be interested in moving the Amiga forward and the Amiga technology forward."

Amor continued: "We are standing by to see what Escom is going to do with the technology – if their intentions are to really make C64s in China and use the Commodore name, they might have intentions to move forward with the Amiga technology. If they don't, obviously we would like the opportunity to do that."

Is he glad the whole thing's over? "Oh, no question about it – absolutely. Now we need a few answers, and Escom hold the key to those answers and the Amiga can move back to where it rightfully belongs." And does he have hope for the machine in the future? "Absolutely."

While Amor remains upbeat, the friction caused between himself and Escom over the partnership with Dell could cause problems – Amor may well have his work cut out.

On their way back



Other than the C64 which is only for the East European markets, the 600, 1200 and 4000 will all be resurfacing internationally by August, or the very latest in October

Commodore UK MBO

Perhaps the biggest surprise, and some would say disappointment, was the withdrawing of Commodore UK from the auction on 20 April. After months of positivity from the ever-optimistic mouth of David Pleasance, MD of the UK subsidiary, the company appeared to put its tail between its legs and scurry out of the bidding process, claiming they lacked the financial muscle to make a viable bid the night before.

Pleasance is happy to explain the full circumstances of this decision. "Three days before the auction, there was news that the other bidders had more money to bid with than our entire working capital. It was an agonising decision – one brought about on behalf of the staff."

It transpires that Pleasance and Colin Proudfoot, the other half of the joint managing director team, didn't want to put their employee's jobs at risk by bidding. Pleasance believes that by placing such a bid, he would have alienated Commodore UK from Escom and any future negotiations may well have been affected – some would say that's exactly what CEI have done.

In case you're wondering, Escom don't own Commodore UK at present – the UK subsidiary was specially excluded from the contracts drawn up by the liquidators because Escom was uncertain whether they would want C=UK as an ongoing concern. Because of this, both Pleasance and Proudfoot have made two trips to Germany to discuss their potential future in the new company set-up. According to Pleasance, he is very hopeful that an arrangement will be found – he and Proudfoot have created a plan for Escom that he feels is a great opportunity for the Amiga, and shows that C=UK could be a valuable asset.



David Pleasance, MD of C=UK: Currently in talks with Escom concerning the future of the UK-based Commodore subsidiary



While Commodore UK backed out of the auction, Colin Proudfoot, joint MD of the company, commented that the UK team have "a good future" with Escom

NEGATIVE FEELINGS

While they have their plans set out for the immediate future, Pleasance is well aware of the negative feelings coming from the Amiga community who were hoping that Amiga International, the proposed title for Pleasance and co's new company, would become a UK-based reality.

"We know that certain parties are disappointed that we just gave up – they feel let down, but I believe they will be more than happy with the outcome eventually" commented Pleasance.

On the subject of Escom itself, he only has kind words for them: "They're the fastest growing PC company in Europe and their plans for Escom UK are very aggressive – 100 stores are being opened on 11th May."

He continues: "The Amiga user base knows that somebody with tremendous resources has taken the Amiga on board and are committed to the long-term development of the machine."

With the conclusion of this chapter in Commodore's chequered history, is he glad it's all over? "Unquestionably."

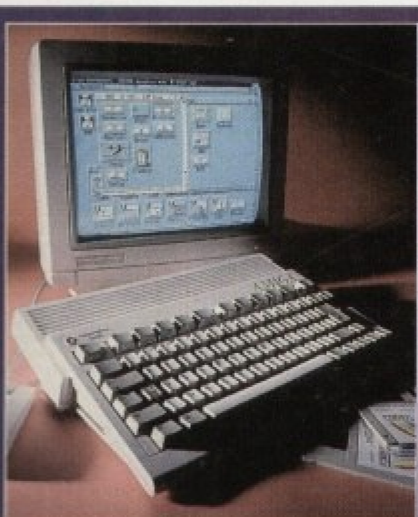
And finally

From where this journalist is sitting, there's an undeniable air of determination and hope for the future of Commodore and the Amiga. While the losers in this first important phase of re-establishing the Amiga aren't likely to start spitting nails at Escom because they all seem to have plans for approaching the company at some point, the general mood is distinctly upbeat and co-operative – that attitude in itself is alien to the Amiga world of over a year ago, where doors were closed to most third-party developers and the other unsung heroes that have stood behind the machine.

Cynically, perhaps this could all turn out to be nothing more than concealing PR from Escom – after all, the company was only interested in the trademark two months ago and have now produced a long list of substantially different plans for the future of Commodore. One gets a feeling that some of the comments coming out of Escom's PR factory and interviews are still generalised and by no means set in corporate concrete.

For the time being, though, while question marks remain and the road to recovery has several large and unchartered potholes dented out of its tarmac, the simple fact that Escom has plans, and has a substantial amount of money to back them up with and a soon-to-be-in-place world-wide distribution network, means the Amiga, even comparing back to its old hey days, has never had it so good.

Escom has a lot to live up to. For everyone's sake, *Amiga Computing* wishes them the very best for the future.







On its way out?



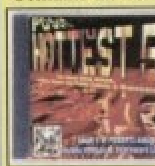
The CD32's future is still in question – there is no mention of it in any of Escom's plans but there is an rumour that its production will be resumed

Thanks to Tim's Megastore (01625 434118) for loan of C64

Hottest 5 CDROM



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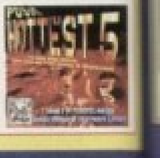


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CD061	UTILITIES V1-1500 (VARIOUS DISKS 1-V1500)	£19.99
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- 52Mb Graphics programs and data.
- 16Mb from The Party '94"
- 13Mb various other tools
- 8Mb educational software
- 46Mb NetBSD for the Amiga.
- 18Mb terminal programs
- 22Mb Animations.
- 6Mb Music programs
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- 82Mb TeX installation
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- 31Mb archive for Psion
- 24Mb modules

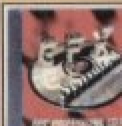
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CD38 MULTI MEDIA TOOLKIT2 £22.99



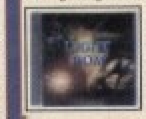
The long awaited sequel to Multimedia Toolkit has arrived, its a double disc set aimed at music and video professionals and enthusiasts. the contents include the FULL OctaMED v5.04 package. (with Aura sampler support). OctaMED will run directly from the CD or can be installed to hard disk. In excess of 250Mb of support files for the OctaMED package have been included, made up from modules, samples, midi files and utilities. Full documentation in Amiga Guide format. OctaMED is a commerical program & is simply the best 8 voice music maker & v5.04 is the latest version produced. In addition we have included the full MidiCraft collection of midi & music X files, samples, modules, tutorials, and utilities. Midi craft are professional musicians and have provided over 50Mb of data from their collection. The graphics side of the collection is well catered for with 500 24bit images geared towards backgrounds, textures and general intrest subjects. Over 140Mb of Imagine objects, 50Mb of Lightwave objects, and loads, loads more!.

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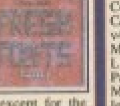
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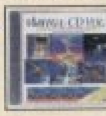
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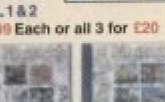
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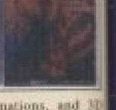
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A strategy game for two players based on a board game called Shogun. Features include flexible mouse/joystick controls, undo and redo of up to 500 preceding steps, fully intuitionized user interface. Complete source code, precompiled include files and debugger files included.

❑ ^ + 4286 **TOP HAT WILLY V1.2**
Nowadays a platform game means something that scrolls in eight directions at 50hz speed, has power-ups and jump-on-a-monster-to kill-it action. This is thought to be an improvement over the 8-bit-style platforms such as Jet Set Willy or Monty.

❑ ^ + 4302 **YUM YUM**
This is a game for children really. It is essentially a Pac man clone. The levels are very simple and the skill level required is quite low. The graphics and sound effects are quite amasing.

❑ ^ + 4306 **ZZZEP**
In this game you fly a Zeplin. You don't have a great deal to do accept for destroying a whole load of little round things whilst avoiding numerous dangers etc etc.. There is a trainer attached to this game if you find it too difficult.

❑ ^ + 4307 **CRYSTAL HAMMER '93**
A classic arkanoid clone with many excellent and colourful levels as you progress through it. Great graphics and sound effects. Very good.

❑ ^ + 4310 **MERCURY MISSION**
Terra-forming eh? What a business. You must initialize the Terra-formation of the planet Mercury by clearing it of five dangerous energy crystals. A thrust type game with good graphics.

❑ ^ + 4311 **PUCMAN**
This, as you may have guessed already, is a Pacman clone. The graphics are good and the playability is just about as close to the original as I have ever seen, an enhanced classic version.

❑ ^ + 4324 **DEMON V1.01**
is a patience cardgame based on one by the name of Canfield. It is reasonably difficult to play but there is a good help system built into the game.

❑ ^ + 4325 **INFECTION**
This is a superb four player puzzle/boardgame. Simply, you must try to take the other players' pieces by moving next to them. Good game.

❑ ^ + 4326 **TURBO THRUST**
Turbo Thrust involves two player racing high speed spacecraft. With split screen action you can't ask for more. There are tracks a plenty and options for speed and laps etc.

❑ ^ * 4333 **EMERALD MINE V6.0**
Preview ao Emerald Mine v6.00 Editor and Game. Totally rewritin sharware version of Boulderdash/ Emerald Mine. Includes 4 Playable levels for ECS & AGA; Highscore/names saving and teamwork playing are disabled.

❑ ^ + 4334 **COMBAT 2000**
Welcome to Combat 2000, although it isn't yet. This is, instead a version of the classic mode that will be found therein. Yes there are still bugs and I'm still nagging Andrew.But the game will one day be completely re-written for now enjoy this version. This is a 2 player game.

❑ ^ * 4335 **OZZE**
The galaxy has open up for those species that have mastered methods of Interstellar travel.

❑ ^ * 4336 **TOTAL AXCESS**
Total Excess is a horizontal right to left shoot-em-up It was entirely made with AMOS and a special programing techics have been used to make this game really stand out in a crould. This is a MUST have program.

❑ ^ ^ 4337 **(AGA) A/THRUST**
An Amiga 'Thrust' type game. No 'ENGLISH' docs included. There is an english 'readme' included which gives quite a few hints. - 100% system friendly. - realtime 2-player-mode via the serial port - 2 players can play using the keyboard - it has a font & size sensitive GUI-frontend - lots of extra weapons - your own screens can be created and used - screen size upto 1024x1024 w/32 colors - optional splitscreen/fullscreen mode while playing via modem - sound effects.

❑ ^ * 4338 **DELUXE GALAGA**
Deluxe Galaga is based on the game StarBattle (vic20) & has some of the features of Galaga and Galaxions. This is a simple shoot'em up game with good game play but not so much fancy graphics.

❑ ^ + 4339 **NEXUS 7 [ANDROMEDA]**
There are some superb graphical effects in this demo. Included are some outstanding 3D rotating fractals, a great routine showing a desk lamp jumping up a set of stairs, bouncing balls, pixel zooms, great music and much much more! Great.

❑ ^ + 4340 **ZEROS AND ONES [ASYLAM]**
This demo has some original routines such as the part which makes your monitor look as if its going on the blink! There is some more good stuff such as a spinning transparent multicoloured cube and excellent music. Good.

❑ ^ ^ 4341 **(AGA) SOULKITCHEN (AB)**
A great AGA demo! There are loads of different effects such as bouncing vector balls, some kaleidascope effects, a great cartoon picture and a superbly funky soundtrack. Excellent!! Does not work on non standard A1200s.

❑ ^ + 4343 **(AGA) JAMMIN' [HAUJOBB]**
A superb demo. The graphics in this demo are of an outstanding quality. The demo runs through very smoothly with some great logos, effects and more. The soundtrack in the most part has a reggae feel.

❑ ^ ^ 4344 **DEMO OR DIE**
A great production. There are some good original effects in this demo. One outstanding routine involves a dot vector skull rotating and then morphing into a dot vector hand. There is some good morphing of portraits at the end of the demo

❑ ^ + 4345 **(AGA) TENSION [APEX]**
Great AGA demo. There are some superb routines including one which has the APEX logo scrolling over a rippling landscape. Some great graphics here as well as a good soundtrack. Good.

❑ ^ + 4346 **RUMBLE RUBBLE**
A pretty bog standard sort of intro. Good graphics, good soundtrack, all the usual effects - dot vectors, bouncing balls etc plus some original routines such as the realtime raytracing of a rotating sphere!.

❑ ^ + 4347 **KILLING TIME (ABC)**
This demo starts off well with a 4096 colour rotating pixel zoom. Then everything gets rather long winded and boring. A three disk set which has some pretty good effects but nothing spectacular.

❑ ^ + 4350 **TRSI**
Another great demo for the Amiga. There are some great graphics in this production as well as a good little soundtrack. Nothing unusual or particularly original but indeed a very good demo. Great.

UTILITY DISKS

❑ ^ + V1523 **RELOKICK V1.41**
Howdi doodlely doooo Amiga freaks! It's ANOTHER(!) version of ReloKick.

❑ ^ + V1611 **SNOOPDOS V3.0**
will log all the dos/library calls and more when you run a program. This is handy for both the programmer and the beginner. For example; Have you ever installed a program to your harddrive and then discovered that it will not run without a certain library but you don't know which?.

❑ ^ + V1628 **STAR TREK OBJECTS**

❑ ^ + V1630 **BABYLON 5 OBJECTS**

❑ ^ + V1631 **ALIENS OBJECTS**

❑ ^ + V1637 **BABYLON 5 OBJECTS 2**

❑ ^ + V1641 **SUPER KILLERS V10.0**
Contains the latest collection of virus killers like AntiCicloVir v2.2a, Virus Checker v6.43, VirusZII v1.07, and VT v2.67, Req LHA.

❑ ^ + V1649 **REFLEX**
Interesting program. It uses an artificial intelligence system to create a personaty for your Amiga.

❑ ^ + V1659 **MSDOS 4 AMIGADOS**
A very interesting utility which should be useful to anyone who uses both PCs/Amigas. The tool allows you to create a directory on which you can store MSDOS commands & then they can be used through the shell as if they were AmigaDos.

❑ ^ ^ V1661 **(AGA) NAT/ LOTTERY**
A national lottery prediction program called Lottery Winner. It consists of a database system which can record the National Lottery results from week2week until it has sufficient data to make certain types of predictions or just a guess.

❑ ^ + V1662 **GAMES INSTALLER 2**
Contains a variety of hard disk installers for a few well known commercial games. These games are as follows: AlienBreed 2 AGA, Jungle Strike, Assassin (Special Edition), Body Blows, Goal, Ishar 2, Zool 2 AGA, Ruff and Tumble, Body Blows 2 AGA, StarDust, Super Frog, Walker, Rise of the Robots, Bubble and Squeak, ElfMania, Aladdin AGA and Motal Kombat 2. Great.

❑ ^ + V1669 **TUDE V1.0**
The Ultimate Degrader is a very extensive & easy way of degrading your machine for all sorts of purposes. It is useful for playing old game on A1200s for example which need kickstart 1.3. There is a GUI version included as well as a CLI version so most people will have no trouble using it. A highly useful tool for all Amiga owners.

❑ ^ + V1675 **BANK MANAGER V1.1**

❑ ^ + V1688 **F1GP-ED V2.04**
will work on any version of F1GP, including the A600 WWW version which was not supported in V2.03 because of a bug. F1GP-Ed allows the user to customize their copy of F1GP.

❑ ^ + V1695 **DALEK OBJECTS**
More imagine objects, sujects or headings like Daleks, Free datasets (3D objects) Imagine format.

❑ ^ + V1701 **GRAPHIC CONVERTERS**
AGAIFF16, IFF-Converter (many formats), V1.60. AMGIF, ConvertIFFtoGIF, APCD, ConvertPhotoCD picture to IFF. ART_PRO, ART-Pro , a powerful gfx-converter. (2)

❑ ^ + V1709 **HINTS & CHEATS**
ACHEATS, Amiga game cheats by Postcard Man. AMI_CHEAT, cheats, level codes, backdoors to 453 Games. CATACOMB_MAP, A map for the brilliant game Catacomb. FRONTIERHINTS, Hints and Tricks for Frontier - Elite II. GCHEATS, Sega Genesis cheats by Postcard Man. SCHEATS, Super NES cheats by Postcard Man. VALHALLA, Walkthrough for Valhalla. WIZBALL, Little ASCII file containing level descriptions for Wizball!.

❑ ^ * V1710 **ADDITIONAL ICONS**
Newiconsextra include: - 2 variations of drawers, each with its own theme. - SGI Folder like drawers - Filing cabinent drawers - Icons for all sorts of PD apps [like degrader, etc] - Icons for all sorts of other things [toaster, par, games, etc] - and more!

❑ ^ + V1711 **FIG**
is a menu-driven tool that allows the user to draw and manipulate objects interactively on the screen of a Sun Workstation. It can only be run within the SunWindows & requires a three-button mouse.

❑ ^ + V1712 **AIBB V6.5**
AIBB is a system performance analysis tool designed with built-in tests for exercising CPU, FPU, and graphics portions of system performance.

❑ ^ + V1714 **GEOGRAPHICAL ATLAS**
Amiglobe allows you to navigate round the world in full 3D It gives you many datas about countries and position of main towns and mountains. Unlimited zoom feature included. Requires use of LHA command and a hard drive. (2)

❑ ^ + V1718 **VIRUSWORKSHOP V4.8**
This virus-killer was programmed to help you to get rid of all the viruses hanging around. Its best and most useful virus killer program to date in my view, takes over where BootX left off.

❑ ^ + V1719 **TELETEXT-DECODER V2.3**
V2.3d (serial) of the videotext/teletext-decoder software for the HSL VideoTXT decoder. It features + load/save/print of gfx/ascii-pages, background receive/save, + international charset support + hidden chars, blinking, + setclock, + works on all Amigas

❑ ^ + V1721 **JPEG TO AGA CONVERTER**
This program converts ppm, pgm and pbm files to IFF-ILBM with support for AGA graphics modes. Binaries to support the JPEG file format are included. To convert other formats you will need the NETPBM package available on Aminet.

❑ ^ * V1722 **AMIGA TO PSION S3/A**
AmigaNCP is a implementation of the Psion link protocol which is e.g. built into the Psion S3/S3a palmtop's ROM. It's main purpose is to provide vice-versa nfs-like file access.

❑ ^ * V1723 **VIRTUAL REALITY [020]**
This program allows you to walk, drive and fly around in a 3 dimensional computer generated world in realtime. It is used to visualize architectural, industrial and artistic designs for presentation or analysis purposes.

❑ ^ + V1724 **ZX-SPECTRUMEMU V4.71**
Is the first release of this emulator, earlier versions were demo versions and were not released by the author !!! This emulator enables you to run almost any program that runs on a ZX-Spectrum.

❑ ^ * V1746 **TERM V4.2 [030]**
The latest version of this very well known comms terminal program. Version 4 has even more features and although it is not for beginners it is probably the best available. Very good.

❑ ^ + V1747 **MAGIC-BACKGROUNDS & MAGICWB ICONS**
This package is a patch to MagicWB, the 8 bitplanes XEN-Icons have been converted to 3 bitplanes icons wich will take less CHIP RAM in your system. This is the fourth release of my Magic-Background-Collection with ten (not nine nor eleven ;-) brandnew backgrounds for your lovely Magic-Workbench. This time you will get some 'winter-pictures' whith ice and snow 8!

❑ ^ + V1751 **PRINTER DRIVERS**
CANON800 v2.0 - EPSON FX-850 v1.0 & LX-800 - HP4DRIVER v35.8 - HP4LSETTER v2.01

❑ ^ + V1754 **FERN GULLY COLOURING**
Select your background, choose a character then you can colour the picture in using your mouse.

❑ ^ + V1755 **BARNEY MEETS SANTA (AB)**
Digitised voice which narrates the story & explains what you must do in the various games & puzzles.

❑ ^ + V1757 **ROCK-A-DOODLE COLOUR**
Select a background, chose a character to paste on top, before colouring the whole picture in.

❑ ^ + V1758 **SENIOR QUIZ - FIRST AID**
Many many questions and answers about first aid. So if you're a budding paramedic then you can hold a quiz night with this disk.

❑ ^ + V1759 **JOES TYPING TUTOR (AB)**
The actual typing lessons are quite good & once you start typing there are many different lessons.

❑ ^ + V1761 **KIDS DISK 6**
A game which allows the user to run a shop. They have to fill out the reciepts for each order & give correct change etc.

❑ ^ + V1762 **A WITCHES COOKBOOK**
Magazine which contains many recipies for herbal remedies. Various substances such as antiaging cream, tinctures, oils and other ointments.

❑ ^ + V1763 **RECIPE/RECORD**
This is a program for the recording of recipies and the like. You can use this system to create a database of different meals, foods or even wines. Simple to use and hard disk installable. Good.

❑ ^ + V1765 **SHIP'S COMPUTER LIBRARY**
One for those trekies out there. is a simulation of the computer you might find on board the Starship Enterprise. You can look up allsorts of information about the federation fleet etc.. Very good. (3)

❑ ^ + V1768 **SET UP PROCEDURES**
If you don't know how to create your own self booting disk then get this. Included is a text file detailing the set up procedures which need to be undertaken to create a self booting disk.

❑ ^ + V1769 **PREDICTION TOOLS**
There are four tools included on this disk. Amiga Punter is a program which will try to help you predict the out come of horse races.

❑ ^ + V1771 **COURSE FORM**
Like to put a bit of money on the horses? This utility allows you to enter the figures for the horses in a particular race, plus the course details.

❑ ^ + V1774 **TELEPHONE BOOK v3.1**
This is a very simple but effective program which will store phone numbers and also there corresponding names and addresses. Easy to use.

❑ ^ + V1778 **LOTTERY CHECKER**
is a great tool for checking lottery numbers. Good for office syndicates. Find 'A' Date is a database which stores & matches people up for blind dates. Sneaker is used to view/change binary files.

❑ ^ ^ V1779 **DIY REKO**
Do It Yourself Reko is an ImageFX arexx macro which makes Reko cardsets (for Klondike AGA) virtualy automatically, saving you lots work.

❑ ^ + V1783 **LIGHTROM 1+2 EXAMPLES**

❑ ^ + V1784 **STARTECK GENIES V1.0**
Seven must have genies for anyone with Professional Draw. The genies are PieCharts, Stars, Emboss/ Engrave, ScalePercent, ZoomWindow, SelectByAttribute and GridSet. Well documented.

❑ ^ * V1785 **TOOLS & MENUS**
CATCHDISK v1.20 - A simple commodity for auto-formating bad/unformatted disks. CHKSUM v1.0, ToolsDaemon v2.1a - Allows you to run programs simply by selecting a menu item from the menu strip of Workbench 2.0. WindowDaemon v1.9 - gives extended control to intuition windows and screens through HotKeys and Arexx.

❑ ^ * V1786 **MAGICMENU V1.29**
Replaces all Intuition menus, supporting both pull-down and pop-up menus. Menus can be displayed in either the Standard look, or the modern AmigaOS 2.0 style 3D-Look.

❑ ^ + V1787 **ATTRIBUTES V2.0**
Contains a full disk of attributes

❑ ^ + V1788 **LENSFLARE OBJECTS**
This is the staging file to render an animation showing an lens flare that move with the light source. objects,brushes and explanations included.

❑ ^ * V1789 **COMMUNICATIONS (ABCDE)**
AmiTCP v3.0, Terminus v2.0d, Source/Developer Kit for AmiTCP v4.0, AmiTCP/IP 4.0. AmiTCP/IP, FTPDaemon v2.0.

❑ ^ + V1794 **AVMNFAX V1.33 (AB)**
This fax program can be used with Class 1 and Class 2 fax modems. (2)

❑ ^ * V1796 **MAGICUSERINTERFACE v2.3**
MUI is an object oriented system to create and maintain graphical user interfaces. (2)

❑ ^ + V1798 **TURBO MODULA-2 v1.40 (AB)**
Compiler is commercial quality: its fast, generates small & fast code, doesn't eat too much memory & the error reports are normally very accurate.

❑ ^ + V1800 **AMINET CDROM DETAILS**
The complete Aminet on 4 new CDs, desc and index, also includes aminet 5 listings.

❑ ^ * V1801 **VIRTUAL WORLDS V1.017**
is a new adventure creation system which allows users to easily create large text & grx adventures.

❑ ^ + V1802 **TEXTURE GUIDE CREATOR**
This File will convert your Original texture.txt & litetex.txt files that comes with Imagine 3.0 into an Easy to use Amiga Guide File.

❑ ^ + V1803 **ADPRO FRONT-END V2.4**
fixes several bugs in 2.3, as well as adding several new screen modes & picture layouts.

❑ ^ ^ V1804 **IMAGEDESK V1.2 (AB)**
a program to catalog picture directories. By this small representants of the pictures, so called thumbnails are being generated & internally expanded to objects which will include all essential attributes

❑ ^ * V1806 **MAGIC SELECTOR V1.60**
is a program who select different background & SoundFX in Workbench each time you are booting up you Amiga. Some Patterns/Sounds are included.

❑ ^ ^ V1807 **SPECTRUM EMULATOR V1.6B**
This program is a Sinclair ZX Spectrum 48k emulator. It needs WB 3.0+, 68020+ and AGA chipset (68020+, WB 2.04+ and any kind of chipset for the OCS/ECS version).

❑ ^ * V1808 **ROMAN'S MAGIC WB ICONS 7**
New, high quality, standard size, MagicWB2.0-style Icons/ImageDrawers and other MWB-stuff. RomIcons7 is Cardware. (2)

❑ ^ * V1811 **IMAGESTUDIO v2.0 (AB)**
is written for the casual graphics user who wishes to convert or manipulate various graphics formats on a modest Amiga system.

❑ ^ + V1816 **DOPUS MAGIC COMPANION**
Loads of extras for use with Directory opus program. Arexx files, Utilities and loads more!

❑ ^ + V1818 **EASY DMS**
DMS used by most cdrom systems for storging disks is now easy to use with the excellent system.

❑ ^ * V1819 **MAGIC WB EXTRAS 5**
Another selection of the finest programs, icons etc for use with The Magic Workbench system (2)

❑ ^ + V1821 **MSX EMULATOR V1.2**
This package includes three flavours of a MSX emulator, MSX 64kb, MSX 256kb and MSX-2. This package is an unregistered shareware program.

❑ ^ + V1822 **PATCHES**
68030 Patches for FinalWriter 3.0 This patch speeds up FinalWriter 3.0 on all 68020/30/40 machines, things like font rendering and internal arithmetic will be up to 400% faster!. SAS/C V6.55 bug fix for Amiga SAS/C 6.50 and SAS/C 6.51

❑ ^ + V1823 **BAUD BANDIT BULLETIN BOARD SYSTEM V8.4**
Up to 99 file libraries with extended filenotes. Up to 99 fully threaded message conferences. Number of users, files, messages, etc. are only limited by storage space. Controlled file library and message conference access for users & sysops. Interface to extra devices like CD-ROM & others, all treated as Read-Only. Complete Email area including binary mail, and multiple forwarding.

❑ ^ + V1824 **DUST TUTOR (ABC)**
Tutorial to help you to become familiar with Dust. Contains many small animations and a guide-file in english.

❑ ^ + V1827 **EGS PHOTO ALBUM**
Picture management and presentation software for EGS. Offers access to large collections of pictures and animation files. Supports DataTypes!

❑ ^ + V1828 **FAST IMAGEFX LOADER**
This is a very fast universal loader module for ImageFX and ImageFX-EGS.

❑ ^ + V1829 **IMAGEFX 2.0 DEV KIT**
Developers kit will allow most amiga programmers to develop modules for nearly any part of the ImageFX 2.0 system.

❑ ^ + V1830 **IMAGE DESK V1.3**
Program to catalog picture files by creating 'thumbnails'

❑ ^ + V1831 **IMAGINE 3.X OBJECT OF USS ENTERPRISE**
This object can be rendered w/ Imagine 3.x only. Very nice Rendering of the USS Enterprise.

❑ ^ + V1832 **80 QUESTIONS**
This is an educational study aide. It allows you to create a 'flashcard' type test to study by.

❑ ^ + V1833 **ARCTANGENT'S BACKDROP & S/U PIX VOL 3**
collection of backdrops and startup pics for the Amiga. Vol 3!

❑ ^ + V1834 **MAGICWB PALETTE & FOXXICONS**
Darker version of MagicWB palettes 35 total". Pretty Magic WorkBench icons for Sound and Misc.

❑ ^ + V1835 **NETBSD-FAQ**
NetBSD-Amiga is a full-fledged unix operating system for the Amiga.It is a combined effort of users in many countries Is freely redistributable,and is constantly improving. You need MMU in your Amiga to run NetBSD-Amiga.Amiga users who are feeling increasingly isolated can now jump on the Unix bandwagon and still keep their Amigas.

❑ ^ * V1836 **MRBACKUP V2.1.4**
is a hard disk backup program for the Commodore Amiga family of computers. It provides a wide range of services to support Amiga file management and backup/restore of files to/from hard disk.

❑ ^ + V1837 **DISK DOUBLING V1.9B**
This package allows you to create virtual partitions on your HD. Files stored in such partitions get automatically compressed and decompressed whenever you access them, in a transparent way.

❑ ^ * V1838 **VMM V3.0**
VMM Implements a virtual memory manager for Amigas with a 68040,68030 or 68020+68851 processor. A localized user interface to enter all parameters and to disable certain tasks and load files from using Virtual memory is also provided.For the user interface MUI 2.3 is needed.V3.0 includes the ability to swap out program code,memory tracking,better MMU support, an Arexx port and some other new features.

❑ ^ * V1839 **MAGIC WORKBENCH 1.2P**
A superb utility! Magic Workbench completely wipes over all those horrible workbench icons, replacing them with its own versions. It also adds patterns and changes your workbench fonts. The end result is a much more attractive workbench. Easy and safe to install. Looks great!

SPECIAL NOTE

All the disks BETWEEN V1501 to v1750 and disks 4001 to 4300 are included on the Hottest 5 CDROM. (See the other page of this advert for more details). Higher numbers will apear on Hottest 6 coming out in the next 3-4 months.

CODES & SYMBOLS

(+)	Workbench 1.3x and higher only
(*)	Workbench 2.0x and higher only
(^^)	Workbench 3.0x and higher only
(^)	Works on WB3 & above
(!)	Not Workbench 3.0x
(-)	Not Workbench 2.0x
(?Mb)	Req ?Mb amount memory to run (2Mb)
(?)	There's ? disks in set or (AB=2)
(K)	Requires disk V1523 KICK to run
(=)	NOT! on an A600

The time,

In the '80s, no self-respecting yuppie could be seen without a smart black filofax in their hand. You might have been hopelessly incompetent, a person so muddled you couldn't organise a beerfest in a brewery, but if you had the filofax at least you would look the part.

Fashion statement aside, these articles did prove to be pretty handy. It's good news, then, to see a new personal information manager on the Amiga that embodies the same handiness and visual appeal in a computerised package.

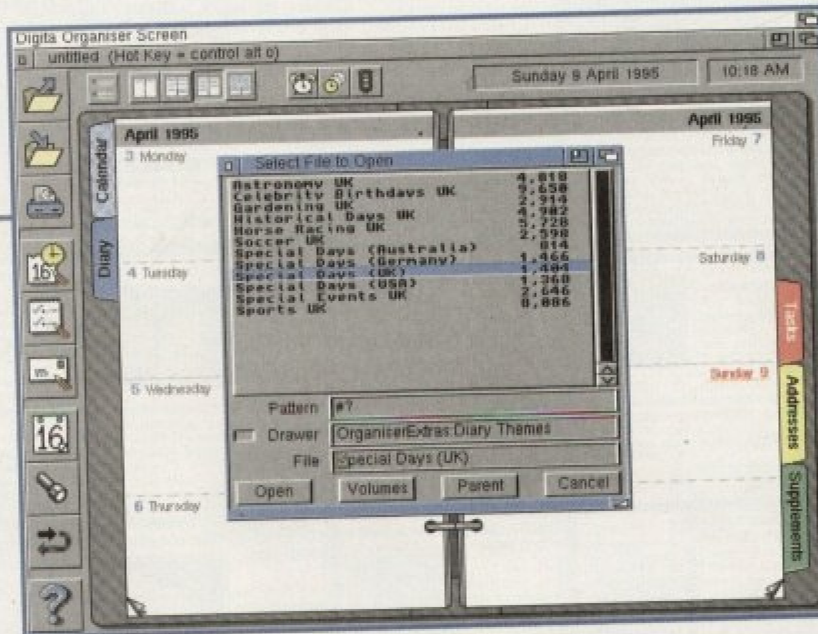
Created by Digita International, Organiser is intended to surpass their own Day by Day commercial diary program and improve on all the shareware and PD options available. Its most immediately obvious advantage will be its attractive, colourful front-end boasting the sort of user-friendly interface that has proved so successful in other Digita products.

Organiser can be run from floppy or can be installed onto a hard drive using the Commodore standard installer. Once up and running, the user is presented with a ring-bound filofax surrounded by a colourful toolbar reminiscent of that found in Wordworth 3.1.

As might be expected with a product from Digita, a lot of emphasis has been placed on making the package as simple to use as possible, so this software should be of general appeal. Consequently, finding your way around the organiser should be intuitive, with functions like page turning performed by clicking on the corner of the filofax.

Like Wordworth, Organiser features Digita's Human Interface Protocol, which in practice means the package can be controlled in numerous ways according to preference. Beginners may prefer to use the representational icons, for example, whereas those who want speed will probably pick up on the keyboard shortcuts available.

> It's easy to keep Organiser much neater than its pen and paper counterparts, and various tasks are undertaken automatically. For some people this could prove quite a time saver



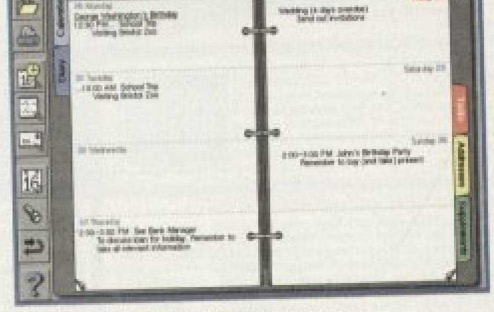
The diary can be made more interesting by including some of the event themes supplied as part of the package

Following the approach of a real filofax, Organiser is divided into five main sections, each accessed instantly by clicking on the coloured tab dividers. Naturally, the diary constitutes the main part of the package.

A novel addition to this section is that users can choose from a number of supplied themes to give their organiser a more personal appeal. Sporting events, historical entries or celebrity birthdays are just a few of the themes that can add a bit of interest to the diary.

REMINDERS

Entering information is simply a matter of selecting the required day and going through a familiar looking requester. At this stage the program allows you to choose a priority level for each date and, if required, select an alarm to remind you an hour, day or week before the event. This can be in the form of a flashing message or a noise sampled through Workbench 3 sound preferences.



Various views are available, from a page a day to a page a week

The diary allows users to select various ways of viewing their entries. If small entries are only being made you can select the option which puts a whole week on a page, whereas those requiring more space can have diaries with a whole page reserved for each date.

One of the benefits of having the filofax on your computer is the way repetitious tasks can be automated. It's possible to repeat events as necessary – for example your twice monthly squash game. Alternatively, the program allows event repetition on the same day every week.

A calendar section precedes the diary and highlights, in bold, any days with events for an at-a-glance idea of what lies ahead. Clicking on a particular date will instantly bring up the correct page in the diary – a simple but user-friendly touch.

The task list constitutes a separate section allowing users to generate a plan of things that need doing. When completed, these tasks can be ticked off on screen, and as in the diary there are five levels of priority to choose from for each item.

As you'd expect, addresses have their own section, and this part of the organiser again benefits from automisation. When you want to enter a new address, it's simply a matter of inputting the details into a database-style requester and it will automatically be filed under the correct letter in the book. Alternatively, addresses can be imported from other databases providing the files are in ASCII format.

A final quirky touch comes in the addition of Fortune Cookies. This will give a

Supplements

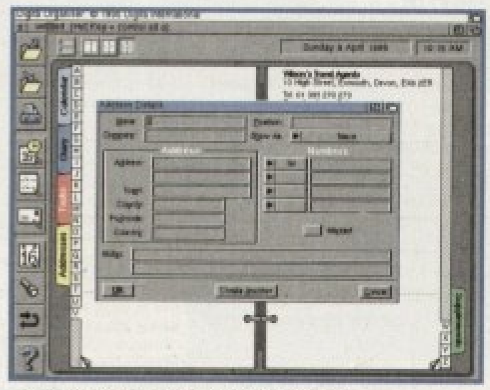
One of the key attractions of the filofax was the fact that you could buy information supplements that could be clipped into the folder as required. Imitating this, Organiser comes supplied with its own range of supplements covering a wide range of topics.

There are items you'd expect to find at the back of a proper diary, like conversion tables, dialling codes and world time zones. Less useful but more interestingly, there are lists of restaurants or wines that could be tagged on to the end of your Organiser.

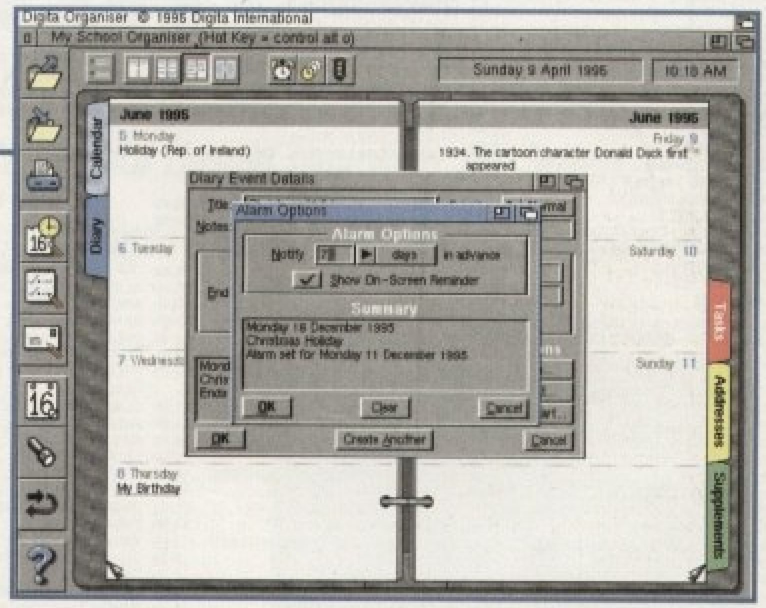
This is yet another feature that allows you to build up a filofax with quite a customised, personal feel. What's more, it's possible to create your own supplements in Wordworth or any text editor. Though there are about 30 supplements to choose from, however, it's not really practical to use more than a few at any time. In fact, because the supplements use up your Amiga's RAM, they'll slow the program down if you use too many.

the place

Amiga diaries are nothing new, but up until now they've been rather dull. Gareth Lofthouse previews Organiser 1.0, Digita's electronic filofax for the '90s



Addresses are entered using this simple requester and automatically filed in the correct place



The absent minded can set alarms for themselves which will remind them in the form of flashing messages or sampled sounds

word of wisdom for each day, though at the moment Digita have yet to complete this section of the program.

One of the most important aspects of Organiser is its printing facilities, since you may want to carry a hard copy version of your filofax. Thankfully, this software supports a huge variety of printers in the same way as Wordworth 3. It's possible to simply print pages in A4, but the best feature is the fact that it will print in the size of portable organisers like Fileofax, Rolodex, Day-Timer and Time Manager. Crop lines will appear showing users where to cut the page to the right proportions, and it's also possible to print on the other side.

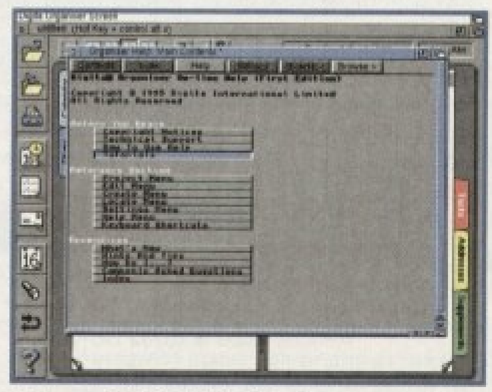
WELL READ

Digita's manuals are always exemplary thanks to the fact they assume virtually no knowledge on the part of the purchaser. Organiser's documentation is very readable and includes the sort of step-by-step tutorials that will get anyone started very quickly. Having said that, the same information is repeated so many times in this product's literature that it sometimes seems like an exercise in padding.

Apart from this, there are the miscellaneous general features that can make a competent program into a classic. Digisense, for example, is a built-in intelligence facility designed to save time when inputting data. The auto date feature, for example, will automatically complete the date you are typing.

More laborious repetition can be avoided thanks to the cut and paste tools that have been included – these work just like in a wordprocessor. Digita have also included a powerful search tool that will find events, tasks, addresses or any other text.

File handling is another powerful and flexible element of the program. It's possible to share data with Wordworth, Mailshot Plus, Datastore and most other programs. These small details don't mean much in themselves, but they are bonuses that show how much Digita have learnt from their enduring experience in Amiga development.



A key part of the Digita interface, the help option should resolve the few problems that might arise

Verdict

With Digita's Day by Day being the only commercial personal planner available prior to the release of Organiser, it's certainly good to see the new product shines in comparison to its rather dismal predecessor. Organiser 1.0 is colourful and appealing to view, and quick and easy to use – and that's how it should be.

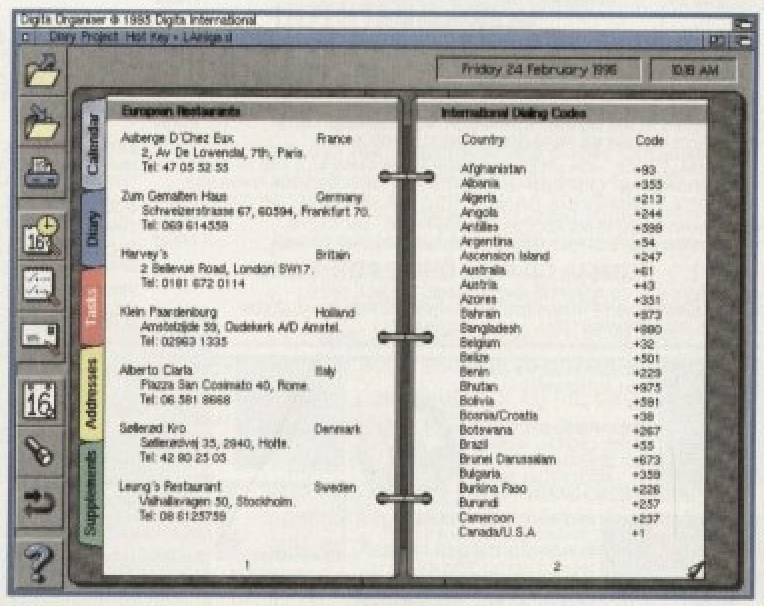
The only problem is whether anyone really needs a computerised filofax in the first place. After all, it could be argued that what the Organiser gains in novelty it loses in true portability.

On the plus side, it's easy to keep Organiser much neater than its pen and paper counterparts, and various tasks are undertaken automatically. For some people this could prove quite a time saver. The option to import information from other programs, the alarm reminder system and the various diary themes gives this software some valuable advantages over a real filofax.

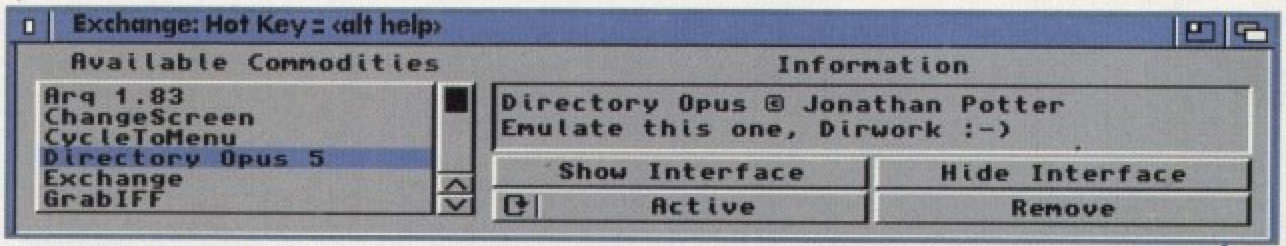
On the other hand the point about filofaxes is that you can consult them on the train, take them into meetings, or use them to find phone numbers at a pay phone. This is not possible with Digita's Organiser. True, it allows users to print up information in a portable form, but that's going to take a fair amount of additional effort.

Other problems include the fact that while you can have a number of people's filofaxes saved in Organiser, they will never be as accessible as the real thing. What happens when Dad wants to view his appointments for the next day but his son Nigel is hunched over the Amiga playing Alien Breed well into the evening ?

There's no doubt that Digita have done a very professional job with this package, and it's so simple to use that members of the family who've never touched a computer could quickly compile there own computer filofax. But whether it was worth the effort will depend very much on the individual customer.



Like a true filofax, supplements can be added to Organiser to customise the program to your liking



Cock a snook at DirWork, would you? I bet Chris Hames is working feverishly on a riposte!

Magnum Opus

Frank Nord closely examines the latest episode in the Directory Opus saga

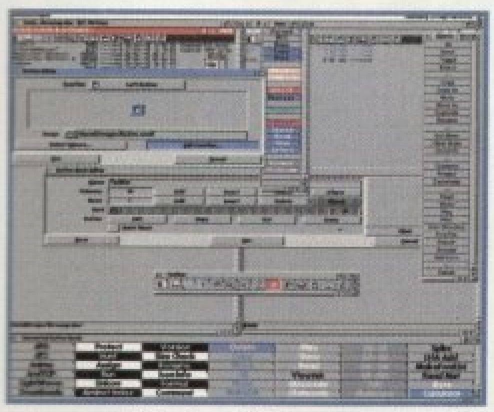
Directory Opus has been long awaited. Since the first murky screenshots appeared in magazines late last year, breath has been baited, wallets clutched, murmurs of concern were heard when Jonathon Potter announced he wasn't going to be using his stablemates of old, Inovatronics, to distribute this multi-tasking beast.

But here it finally is, and the metamorphosis has been even greater than could be imagined. We were all ready for a larger amount of configurability, prepared for a new windowing system, we had even set our shoulders in grim determination when we heard you could have more than the standard two directory windows open at the same time. What I certainly wasn't prepared for was the fact that Directory Opus 5 could replace Workbench altogether. That's right, you don't even need to load Workbench at all.

ANOTHER WORLD

If you choose the 'Replace Workbench' option, everything seems perfectly normal, there doesn't seem to be any difference. But as soon as you open a window on your Workbench screen, oh boy, you sure are in a different world. By default, DOpus doesn't fill its windows with icons. Although you do have that option, the default is actually to fill the windows like, well, like a file manager should. A burst of little icons fills the top edge of each window, letting you perform all the essential operations any file manager should be capable of such as copying, renaming and deleting.

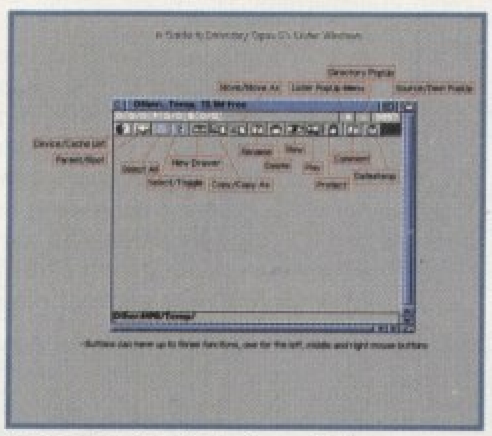
Running DOpus as a Workbench replacement seems like a really neat idea at first. Anyone who has played with Norton Desktop for Windows will know what I mean. It's funky to open your hard drive's window and find everything listed as text, with the ability to copy, move, rename, delete, etc. right at your finger tips in the window itself.



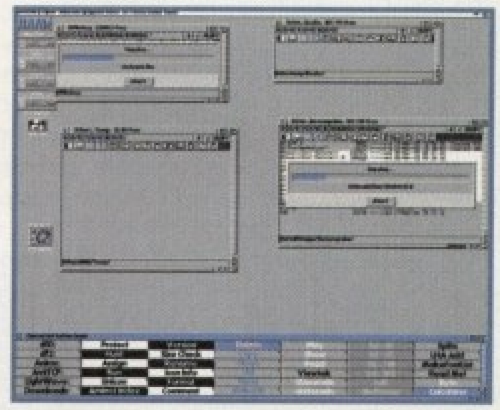
How many button bars did you say you wanted?

It's also nice not to have your entire Workbench screen filled with windows as you move through sub-directories. DOpusbench will let you do this if you want, but normally it will only replace the files shown in the window with the sub-directory's contents, as you would expect. But soon you get a bit fed up at the loss of all those customisations you had on Workbench.

Apart from its looks, things have changed under the bonnet too. Directory Opus 5 is now a fully multi-threaded, multi-tasking package with the ability to perform several operations concurrently. One of the screenshots on these pages shows the contents of



Is this enough gadgets for you?



The directory manager is faster than the eye as DOpus 5 copies between two pairs of directories at the same time

a disk being copied to a directory on my hard drive, while another pair of windows are being used to copy some files from another partition into RAM:. This ability is particularly useful for anyone who wants to copy files onto several disks at once, because you would be able to have as many copy operations going as the number of floppy drives you had.

OUTSTANDING

There are some really nice features with this new version. The ability to perform several operations at once must rank highest on the list, but there are some outstanding tools that vie with multi-tasking for attention. The ability to drag and drop more than one file at a time is a definite bonus, along with filetypes which are saved out with icons.

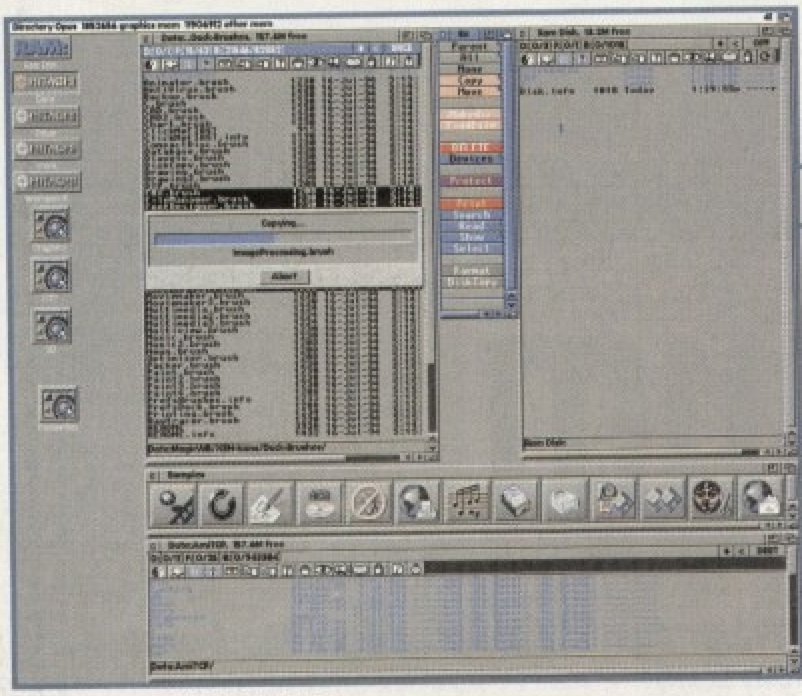
I think we will soon be seeing collections of these filetypes uploaded to Aminet, performing such esoteric functions as displaying imagine objects or HTML pages and so on. The fact that the built-in viewer now supports datatypes should be applauded and will certainly cut down on the amount of configuration that needs to be done to show GIF, PCX and Jpeg pictures or play VOC or WAV sounds. I liked the new ability to use the keyboard to navigate DOpus' interface.

➤

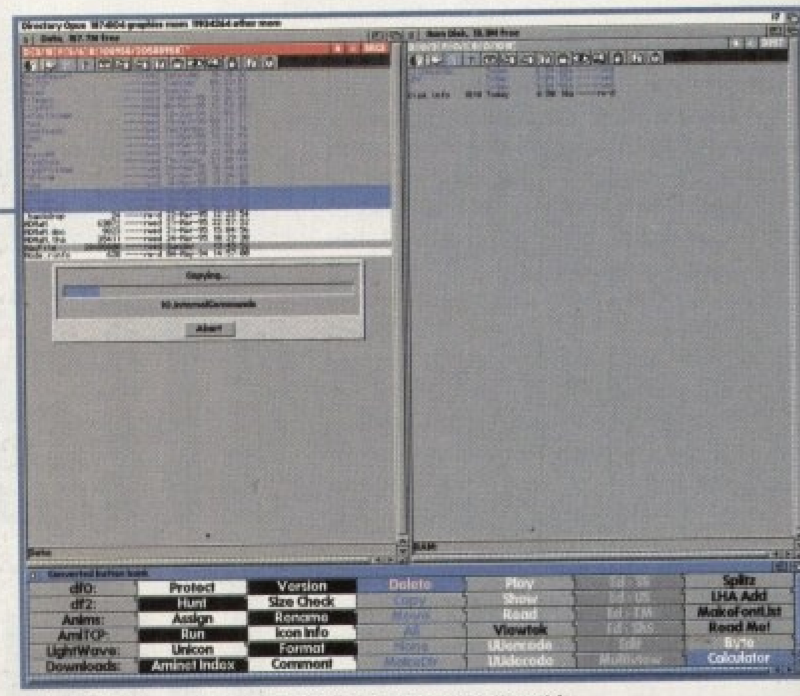
Slight confusion

The manual could stand some improvement. It's very nicely laid out, but the index is fairly poor and there are several typos and things that look like typos, but are, in fact, design elements. They have used the Right Amiga symbol that appears in menus to show that you are reading about a menu item. But this symbol is usually used in a manual to show the keyboard shortcut for that command, which makes things even more confusing because they don't show the shortcut – they are just in the manual on their own. One of the real disasters comes when you read the information about the internal 'Finish Section' command – it gave an example that sounded very useful indeed. The manual said you could get DOpus to beep when it had finished an operation, and the example given was using LHA.

I use LHA all the time and thought that given DOpus 5's ability to multi-task, it would be very useful to get it to beep on finishing the LHA compressing or decompressing. I followed the instructions down to the last letter until I came to the internal command 'Beep.' There isn't one.



Your Dopus could look like this...



...but I think most people's will end up looking like this.

Instead of swapping source and destination windows as it used to do in DOpus 4, the space bar now switches on keyboard mode. To show this you are given a little arrow cursor in the active directory window which you can move up and down with the cursor keys. Selecting files is done with the return key and double-clicking on them can be emulated with the Enter key on the numeric pad.

The context sensitive on-line help is also useful, although I would have liked to see slightly more index entries. One other thing I liked was that DOpus 5 now caters for the three button mouse owner too. Most buttons can be configured for three different operations depending on the mouse button used, giving even more flexibility (all the same, I think I'll still use my middle mouse button to swap between screens rather than use it in DOpus).

However, if you've seen the requirements for DOpus at the bottom of this page, you will have noticed that you can no longer take it with you when you go to rescue a friend's hard drive. The price for all these added elements is the increased size of the application. It still comes on one disk – it only takes up about 800k of hard drive space – but that doesn't really leave enough room on the disk to install workbench as well.

One of the other features which had me slightly confused until I ran DOpusbench is an icon on DOpus's screen called 'Favourites.' This is a 'Program Group.' The reason for it became clear when I realised that running DOpusbench means you lose ToolsDaemon and ToolManager even though DOpus has the ability to show entries added to the Tools menu.

PROGRAMS

These program groups are where you are supposed to drag your most-used programs to to save you having to click through directories to get at them. You can have as many as you like and they can be called whatever you like, but it reminded me too much of Windoze, so I gave up on the idea of using them almost as quickly as I did on using DOpusbench.

The default configuration is, unlike DOpus 4's, pretty unusable, so there is no alternative but to configure the program to meet your needs. However, configuration has gone from one button in the bottom-right corner of the DOpus 4 interface to not one, not two, but eight separate menu items scattered from one end of the title bar to the other. I understand that each of these preferences tools are discrete, multi-tasking programs in their own right, but couldn't we have had them all in one place?

One of the really annoying problems with this schizophrenic configuration method is that keyboard shortcuts get duplicated. On my DOpus I like to have the Delete key as the shortcut for deleting files, surprisingly enough. When I hit the Del key in DOpus 5, however, I get a Lister Format window appear. Now, I've scoured the manual for a way to stop this from happening so that I can be re-acquainted with my Del key, but all it smugly tells me in the manual is the fact that not only can I use the Lister Status PopUp menu to call up this Lister Format window, I could also double-click with my right mouse button in the lister.

What it doesn't say is that the Del key also works, nor does it tell me how to stop it from working. Two methods for calling up this window seem ample to me, why

In the wrong direction?

As you can probably guess from the text on these pages, DOpus 5 has got me really frustrated. It certainly is different from DOpus 4 and pretty much any other file manager, and is a lot more ambitious in its scope. But it is so much of a paradigm shift that it makes me wonder if anyone is going to use it to its full potential.

I have always plugged DOpus 4 in my various reviews and features, basically telling everyone that if they were to only ever buy one piece of software, then that should be it. So I, possibly more than others, feel disappointed that the clean interface DOpus 4 presented to the world has been swapped for something that could almost have been designed by Macro Systems (no offence, guys).

Directory Opus' changes make me wonder about change for change's sake. Progress has once again triumphed over common sense, and what was an incredibly good file manager with only two flaws (not selecting .font files when the font directory was chosen and not being able to discern between two floppies with the same name) has become something that will require more maintenance than your hard drive.

I think what will happen for the vast majority of people is that they will load their old DOpus 4 config file and then not bother with the new configuration abilities of DOpus 5. And guess what? DOpus 5 still can't tell the difference between two floppies with the same name.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

2.04 Kickstart · 1 Mb RAM · Hard drive · 4 Mb RAM · 68030

The bottom line

Product: Directory Opus 5
Supplier: Wizard Developments
Price: £49.99
Tel: 01322 277908

Ease of use	**6**
Implementation	**8**
Value for money	**8**
Overall	**8**

The art of

TVPaint has been part of the power graphics scene since the early days. In that time it's seen a number of revisions which have always brought the cutting edge of painting technology to the Amiga. Not surprisingly, this tradition continues, but on the face value you could be fooled into thinking the update applies more to the price rather than performance. The assorted buttons and icons look worryingly familiar. However, dig a little deeper and the price to performance ratio improves dramatically.

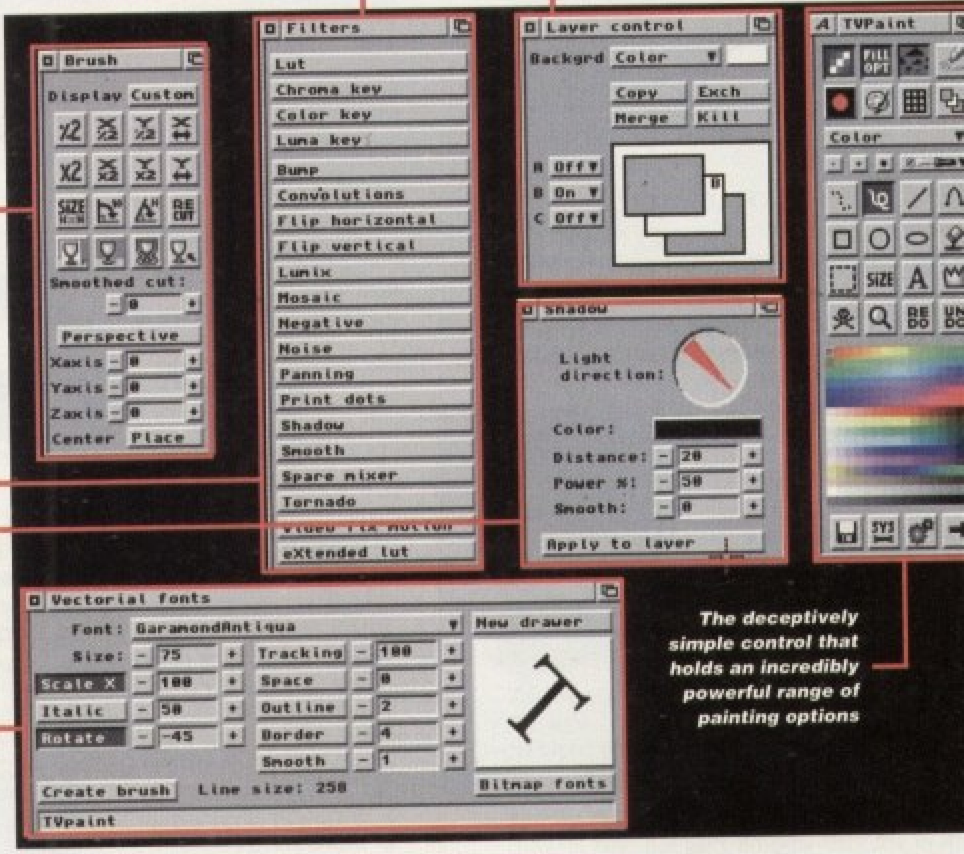
The key to this latest incarnation is the arrival of layers as the pinnacle of the TVPaint environment. In the past TVPaint, like the majority of Amiga packages, used the traditional paging approach – taking the form of a double buffer primary and spare page. However, with the arrival of TVPaint 3.0 the Amiga takes its place in the forefront of painting technology, alongside the latest PhotoShop 3.0 and Quantel's Paintbox.

In simple terms, layers offer the ability to view multiple 24-bit images on the same screen while retaining the ability to edit them independently. In reality, this is achieved by stacking the buffers one behind the other.

SHARING

In TVPaint's case this translates to foreground, middle ground and background layers denoted as buffers A, B and C, with all three sharing a user-definable background colour. In addition, you also retain a spare page for work in progress and the application of specific special effects. This means you can paint on layer A and then switch to layer B. If you then add more paint to this layer it will appear behind anything in the first.

The same applies to layer C, the end result being a 24-bit graphic sandwich with layer B as the filling. And of course, these multi-layer



The arrival of built-in image processing is a major innovation

Possibly the most important requesting in the entire package

Perspective, re-cutting, soft edges, scaling and orientation – bliss with burshes

A typical example of a user-definable filter

Excellent scalable and bitmapped font support

The deceptively simple control that holds an incredibly powerful range of painting options

projects can be saved just like a single image, but when reloaded you can disassemble the image, rearrange the layers and edit them with complete freedom.

Not surprisingly, you're free to turn layers off and on as required, swap, merge and rearrange their position in the stack via requesters or hotkeys. Put in such simple terms, it's easy to be unimpressed by the degree of added freedom and flexibility this gives the artist – only when you get some hands-on experience does the true impact really hit home.

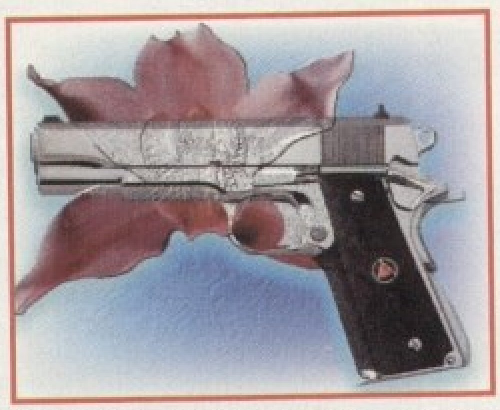
Like its predecessors, the latest release is actually a 32-bit rather than 24-bit environment – with the additional 8-bits providing built-in alpha channelling. In short, built-in alpha channelling allows you to generate a seamless fade from one image or brush to a freely definable level of transparency. In every single pixel has its own alpha or tra parency value which can vary between 0 256.

Classic examples of alphas in action Movie trailers and promotional material w invariably feature multiple scenes and cha ter close-ups, all crossfaded and blended a montage – all of which could be capt via TVPaint's direct support for VLab.

APPLICABILITY

This essential commercial skill has alv been a part of the TVPaint repertoire, indeed still is, but it now applies across tiple layers in real time. If you appl alpha channel transparency to an eler in layer A, its affect is carried right thro all the subsequent layers.

Combine alpha effect with density



A typical example of filters in action, with the bump option adding texture to the blue backdrop and embossing the orchid onto the barrel

A touch of class

With the availability of such comprehensive alpha support, the actual process of applying paint to paper can be much more subtle than simply clicking on a mouse button. As a result, TVPaint offers extensive support for pressure-sensitive tablets, with Wacom being particularly well supported. Equipped with an appropriate tablet, TVPaint truly ranks among the very best painting environment on any platform.

As you've probably gathered, this is pro product from start to finish, and nowhere is this more apparent than via the program's built-in virtual memory facility.

For commercial artists, resolution is a constant irritation, especially for those working in print resolutions – *Amiga Computing* cover images are never smaller than 1500 x 1000 pixels. Imagine if you were commissioned to produce an image twice or perhaps four times this size. The on-board memory requirement would be massive. Fortunately that isn't a problem thanks to TVPaint's Big Edit option.

It's true that using Big Edit can slow the creative process, but the benefits for any serious commercial artist are immense. In fact, the only limitation is the amount of available hard drive space on the partition you've chosen to contain the Big edit swap file.

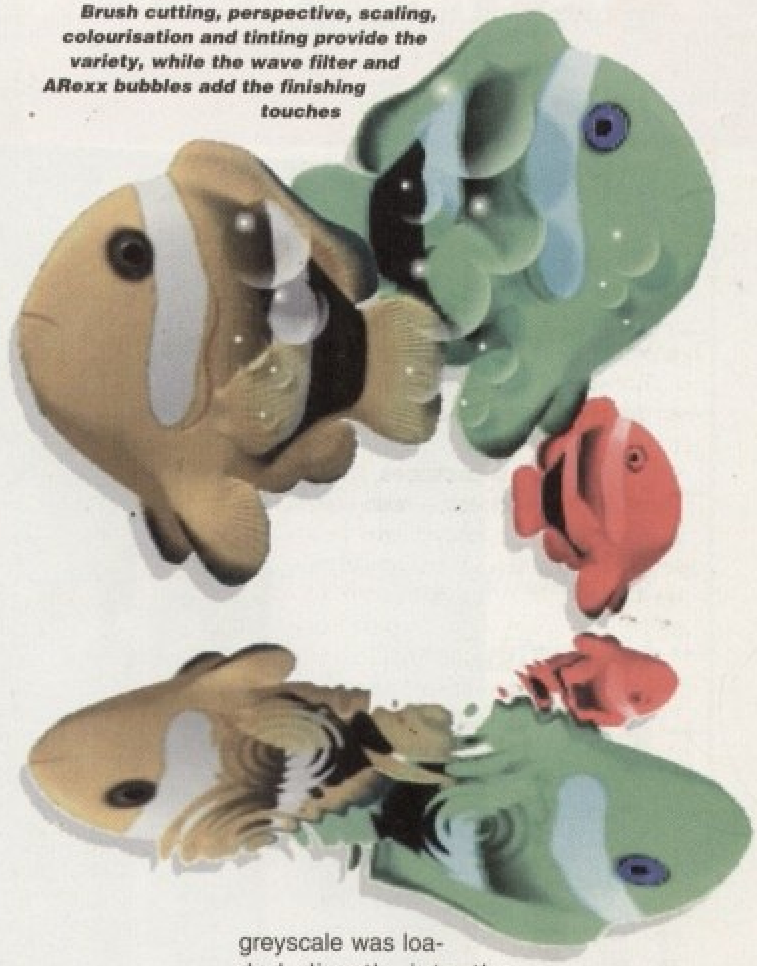
The process works by defining the size of the project and then selecting an area equivalent to your present page size from a scaled representation of the entire project. Once your edits are complete on a particular area, you simply save the changes and reselect another area to work on until your masterpiece is complete. Simple, efficient and often essential.



Although not detailed in the article, you c see TVPaint's new scalable font handling superb in any size, aspect or angle

f the matter

Paul Austin explores the latest update to the Amiga's ultimate painting environment



Brush cutting, perspective, scaling, colourisation and tinting provide the variety, while the wave filter and ARexx bubbles add the finishing touches

Filters for all

As mentioned briefly before, filters – in the style of Kai Power Tools on the Mac – are now a part of the TVPaint environment. At the moment the package ships with 20 assorted filters – with more in the pipeline – which either work directly on the selected layer or operate in concert with an image on the spare page.

Each filter produces its own dedicated requesters for fine-tuning the effect and defining whether it is to be applied to a single layer or over the entire project. Classics include the shadow option, which applies a user-defined shadow to the layer of your choice. Panning is another excellent addition which will pan either individual layers or the entire project in a user-defined direction and amount.

the assorted drawing tools, soft edge brush cutting, and a multitude of image manipulation options and you could have a masterpiece on your hands before you've applied any paint.

The actual application of paint and effects is also beautifully implemented, and now boasts the left mouse button erase feature as pioneered in Photogenics. Unlike Photogenics, though, complete ARexx automation is available across the board for those boring jobs.

In addition to the aforementioned button, you also have full undo and redo options – redo being particularly useful because it allows you to reapply existing strokes with different colours, modes and effects.

Quite literally, everything can be combined; drawing tools such as pens and airbrushes, and drawing functions like straight lines, filled shapes, bezzier curves, bucket fills or freehand can all be used in combination with the drawing modes – colour, merge, erase, pantograph, and so on. By mixing all the possible options, over 2000 combinations are available – all with user-definable parameters.

POWER

A classic example of this is the combined power of a bucket fill in erase mode. If we assume an image has been loaded which contains a specific element amidst a predominantly dark background, a bucket fill in erase mode – given an appropriate fill tolerance – would remove the unwanted areas of the image, revealing any layers beneath.

The element could then be cut out as a brush, scaled, given perspective or image processed, used as a painting tool in the mode of your choice, pasted into another layer or perhaps applied as a soft edged, user-defined density fill for a drawing



An attempt at a jazzy logotype, with gradients, fonts, and real-world images dropped in as density fills. And of course the ubiquitous drop shadow

function. Things get even more funky with the aid of the spare page. Take a quick glance at the gun image and you'll notice the blue density fill in the background has a texture. To achieve the affect a separate greyscale was loaded directly into the spare page. The layer containing the density fill was selected and the bump filter applied, at which point the former smooth blue background regenerated behind the gun and orchid as you see it.

Just as easily, I could have applied the effect to either the orchid or the gun by simply selecting their particular layer – and, of course, you can also apply the effect across the entire project if you wish.

Of course, you're not limited to simply loading images into the spare, as you're free to cut and paste and copy elements or entire layers to the spare.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

8Mb Ram, 030 with FPU
Graphics card, Picasso II, Retina, Retina Z3 EGS, Rainbow 3 or Spectrum

12 Mb, Graphics tablet

The bottom line

Product: TVPaint 3.0
Supplier:
Phone:
Price:

Ease of use	**10**
Implementation	**10**
Value for money	**7**
Overall	**9**

Verdict

At risk of stating the obvious, the new TVPaint is without doubt the best paint package I've ever had the pleasure to use. In fact pleasure aside, usability and effortless power are the real issues.

You don't have to compromise, you don't need to make masks, stencils or all the other things that make computer-generated art a pain rather than a pleasure, you don't have to save out at every stage in case of accidents, you simply do whatever your imagination can dream up with the minimum of effort. The program has obviously been designed for artists rather than computer users. No matter what springs to mind, actually achieving faultless and accurate results is both quick and simple.

Obviously, with the arrival of Photogenics at a fraction of the price, most users will choke at the prospect of coughing-up this sort of money for a paint package. This is a factor which may be compounded by the arrival of the next Photogenics update, which promises full 24-bit on Picasso II, Retina Z3 and so on.

However, TVPaint isn't designed for most users. For those who require, and can afford, this kind of flexibility and power it's quite simply an essential. In fact, my only real complaint is the 'so you've never used a computer before approach' in the manual, and the almost fourfold increase in the asking price. However, if you can convince yourself there's even a slim chance you'll make good on your investment, I'd sign the cheque without a second thought.

A sound future

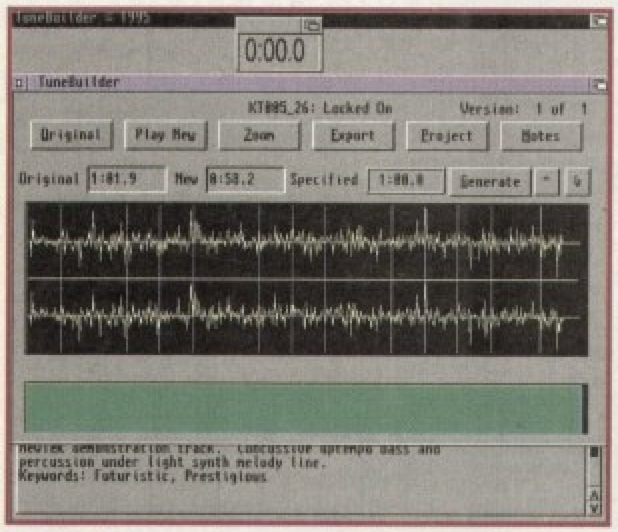
Supported by some of the best creative packages available, the Amiga is the first choice computer for video and music professionals. Now Gareth Lofthouse previews TuneBuilder, a music editor that promises to amaze

Spring has brought good news for Amiga musicians, not least with the release of version six of the ever popular Octamed reviewed elsewhere in this issue. The high-end Amiga user, however, is more likely to be tantalized by a surprising new product that has already caused quite a stir in the *Amiga Computing* offices.

Created by Airworks Media, it's claimed TuneBuilder will revolutionise the way music is edited. With video and film makers particularly in mind, the package offers CD backing music which can be timed, cut and rearranged as required using the supplied software.

TuneBuilder is designed for use with CD music libraries specially embedded with edit points that allow each piece to be rearranged, shortened or expanded. Once loaded into the program, the user can specify a required length of playing time to fit almost exactly a sequence of film footage.

The system's benefits don't stop there, however. A musical piece might, for example, have a percussive effect that would suit a particular moment of action in a video. Using the editor, Amiga owners will be able to rearrange the tune so that the required sound effect comes earlier or later in the piece to fit in with the film – a feature that should prove to be an amazing time and cost saver.



Music tracks are loaded into the editor where the playing length can be specified or blocks recombined

SIMPLICITY

Though this is a package worthy of professional use, the interface lends the process childlike simplicity. Music appears in the editor broken down into a series of blocks, and rearranging it is simply a matter of dragging the blocks into the desired position using the mouse.

The ingenuity of the system lies in the fact it can play new versions of recombined music segments instantly, without any hint of a pause or a clash between sound blocks.

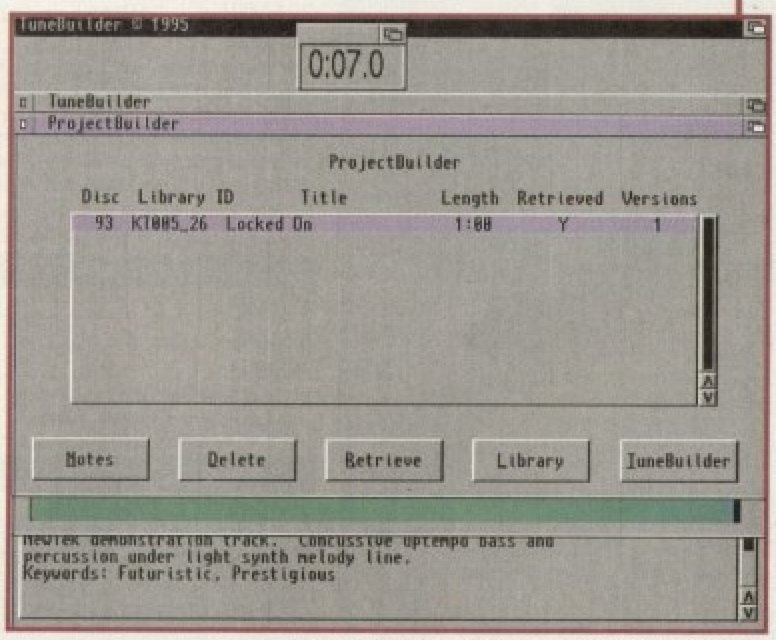
This is largely down to Airwork's use of professional musicians for the task of selecting the edit points on the CD – apparently every minute of music has taken two to three hours of work to accomplish successfully. Setting the length of the piece is even simpler than rearranging it. In the preview version, creating a new tune accurate in duration to a specific frame was not possible, but TuneBuilder will automatically generate a sequence that comes within tenths of a second of your specified time.

Music is retrieved from the CDs and manipulated in the editor as 8-bit sound. However, once satisfied with your new version it can be exported for video applications as 16-bit stereo if required. What's more, the software supports an impressive range of audio file formats.

For example, Sunrize, Sun audio, WAV and Toccata formats are all available. The latter should prove a boon to VLAB Motion owners who will be able to load edited pieces directly for use with the Toccata board.

TuneBuilder will be packaged with the Arpeggio music library, AirWorks' collection of 345 music cuts covering 12 CDs, with a variety of themes for all sorts of purposes. The asking price of $950 for non-broadcast material or $1800 for material to be broadcast may make some readers quail, but it represents real value for money in comparison to alternative methods.

Other companies are creating large libraries for use with TuneBuilder. A Killer Tracks demo CD was supplied to us with the required edit points, and if the pieces are typical of the standard we can expect, then the professional is in for a treat.



The export requester, and TuneBuilder boast about all the options you could ask for

Breakthrough

A certain amount of product hype from the developers is to be expected, but for once the implications of this new technology could be as dramatic as the owner's hope if it's marketed correctly. Previously, the only way to match music to video effectively has been either to hire sessions musicians or to create your own tunes by investing in midi equipment, and either of these options can cost the videographer an arm and a leg.

By contrast, TuneBuilder puts control over music into the hands of Amiga users in a way that's not been possible before. Thanks to the efforts of Airwork's professional editors, even the tone deaf will be able to produce a background soundtrack to very high standards.

Ever keen to keep our readers abreast of the latest and most prestigious software available, *Amiga Computing* will be giving TuneBuilder a full review as soon as it's finished. Looking ahead, however, Airworks envisage a time when the likes of the latest Madonna CD will be released on CD-ROM with pre-embedded editing points for arrangement with this system. Perhaps now you're getting an idea of just how important TuneBuilder could be.

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Paul Overaa shows you an easy way to add Midi song playing capabilities to your Basic and C programs

Music for the masses



There are plenty of real good Midi files around these days and whether you like the classics, country, pop and rock, or more obscure stuff, the chances are that someone, somewhere will have produced Midi file arrangements to suit your tastes. In short you just buy the files, load them into a sequencer, and play them.

Incidentally, some commercial libraries can provide their material on Amiga format disks, although most offer only MSDOS format. Needless to say, this is no great problem nowadays because these disks can be read via CrossDOS without any trouble at all.

Library files are usually configured for General Midi type equipment, so most people usually need to do a little channel and patch editing to get the arrangements sounding right on their particular Midi equipment. Once you've saved a version that is suitable for your system, however, you'll be in a position to 'load and play' these arrangements just as easily as you might play a record or CD.

The question we might now ask is whether or not it is possible to add these types of file-playing facilities to our own programs. Midi file playing, as many of you will know, is quite complex, but by converting a Midi file into a format known as MPX2 it is possible to simplify beyond belief the code needed to regenerate the stored Midi data.

What I'm going to do in this tutorial is show you exactly how MPX2 file loading and playing facilities can be added to your own programs. The result is that with relatively little additional code it becomes possible to write programs that can play pre-arranged Midi file song material in essentially the same way your sequencer can.

FILE STRUCTURE

It should be pretty obvious that the key to writing any file processing utility is to understand, in detail, the relevant file format. Before I look at the MPX2 format, however, I ought to recap briefly on the structure of conventional Midi files so that you can appreciate the benefits that MPX2 files provide.

At the highest level, these files consist of blocks of data called chunks that consist of a 4 byte identifier field followed by a 4 byte number that tells you how much data is in the chunk. Two types of chunks are currently defined: Header chunks, which have a 'MThd' identifier, and track chunks, which have a 'MTrk' identifier.

Midi file chunks can be arranged internally in three ways and this leads to three types of files: The type 0 format files contain a header chunk followed by a single track chunk used for storing a sequence or song as a single stream of events. Type 1 files allow multiple track sequences to be stored, and these contain a header chunk followed by separate track chunks which represent tracks to be played simultaneously.

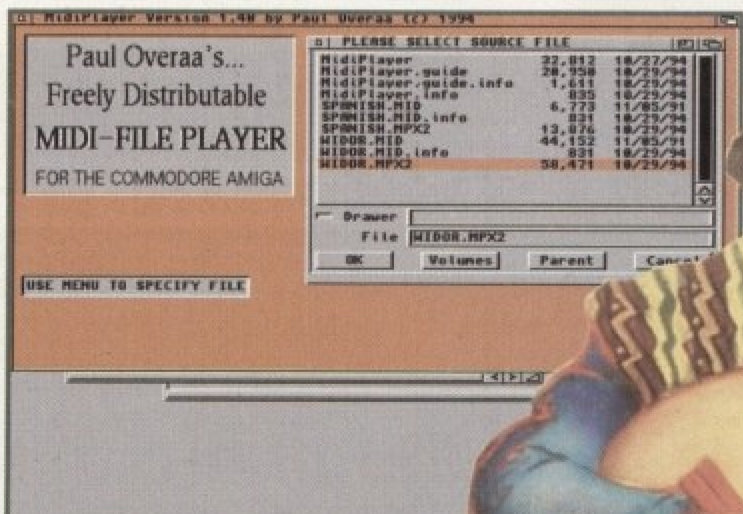
One last type of file was developed to allow sets of independent sequences to be stored, but these so-called type 2 files do not seem to be used to any great extent.

As far as chunk arrangements go, the 'MThd' header chunk is always the first one in the file and it currently has three words of data – the first identifies the file format (0, 1, or 2), the second tells you how many track chunks are present in the file, and the last contains timing interpretation details.

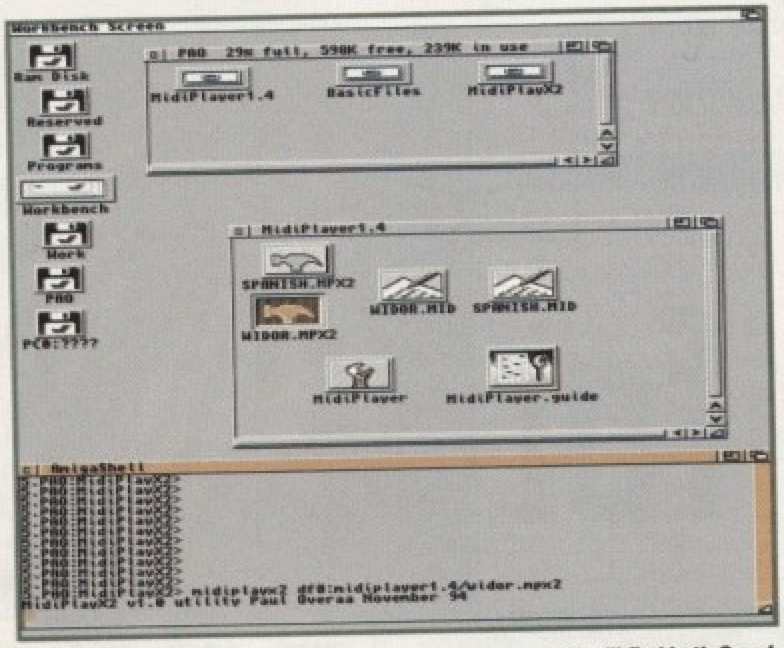
The data events stored in a Midi file all start with a time delay field, a so called Delta time, that specifies the amount of time which should pass before the specified event should be played.

It's worth mentioning that Delta times, and a few other Midi file items, are stored in a byte-efficient variable length format that has to be unpacked before it can be turned into a sensible numerical value. MPX2 format files, incidentally, do not use compacted time values, which is one of the things that makes them easier to read.

Midi file events can be one of three types: Midi events (channel messages), Sysex events, and a collection of non-Midi items known as Meta events. I'm not going to go into detail about each and every event structure because the MPX2 arrangements make it unnecessary for you to know what type of data is in the original Midi file. As an illustration, however, here are some details of the ➤



Paul Overaa's Midi file player has now been especially modified to convert Midi files to MPX2 format



You'll find both C and Basic MPX2 file playing example programs on the CoverDisk

layout used for Midi file Meta events: They start with an FF hex Meta event identifier, followed by a 'type' field, a byte count, and the data itself. The type field is a 1 byte value between 0 and 127 and the count field is stored in the same variable length format as is used for delta-time values.

Two Meta events of particular interest by the way, are those that allow the end of a track, or a change in tempo, to be recognised, although a great many other events have been defined for embedding track names, lyrics, copyright notices and so on.

HARD WORK

Midi file reading, as I've already mentioned, is not particularly easy. Chunks have to be identified, their contents extracted and unpacked, and Midi events have to be separated from Meta events. With type 0 files these events will be time ordered by virtue of their positions in the file and their delta times.

With type 1 files the situation is more complex, and in order to produce a stream of Midi data it is necessary to merge in time order all the events from all of the track chunks. When you realise that running status (i.e. the use of implied status bytes) is also allowed within streams of stored Midi events, it's not hard to see that writing Midi file unpacking code is no small feat.

At the playing end of the 'Midi file to Music' conversion scenario the task is simple

> With relatively little additional code it becomes possible to write programs that can play pre-arranged Midi file song material in essentially the same way your sequencer can

enough to explain. The time ordered blocks of Midi messages generated as a Midi file were examined and have to be sent down the serial line at the appropriate times.

If you think about this end of the problem you'll realise that what we really need for playback simplicity is a file structure that allows blocks of Midi message data to be stored exactly as they should be transmitted.

One easy way to achieve this would be to opt for a file format that uses blocks consisting of a fixed length time value, followed by the Midi data in the exact form needed for transmission. The snag here is that in order to transmit a block of serial Midi data you need to know the size of the block. In other words, a block size field needs to be included with each event, and with the MPX2 format the event arrangement adopted is this:

```
<>4 byte microseconds delay>
        <>2 byte block size (S)>
                <>S bytes of Midi data>
```

The good news now is that the MPX2 file structure is based on exactly these types of event blocks, tagged onto an 8 byte header like this:

```
4 byte MPX2 file identifier ("MPX2")
4 byte event count     N
N events
        {
        <>4 byte microseconds delay>
                <>2 byte block size (S)>
                        <>S bytes of Midi
data>
        }
```

The first MPX2 header field lets you check that a file actually is a real MPX2 file before you process it. The second, the event count, indicates how many events are in the file. A file reader simply has to read the identification and count values and then output the required number of events down the serial line.

Handling an MPX2 event is both eas and efficient. Firstly, you read the time dela field and execute an appropriate time device delay, next read the block size to se how much data you should transmit an finally, perform a single Exec DoIO() call t transmit the complete associated block o event data to your Midi equipment!

The key advantage of this file format the is playback simplicity. Because MPX2 dat blocks contain only pure Midi messag information programs do not need to do ar complicated event unpacking or interpreta tion – they can just read blocks of Midi da and transmit them without caring about the contents.

There are a variety of ways in whic MPX2 data files can be used, but the sir plest approach is to open the file as an ord nary sequential input file and read the eve data using the in-built Basic file handlir facilities. To illustrate this approach, and b bang up-to-date, I've opted for an examp based on HiSoft's new Basic 2 package.

To produce runable code I did, of cours need access to the Amiga's serial po Serial device handling is no proble because HiSoft Basic 2, like most Basi

MPX2 file reading using C

One of the problems with using high-level language file reading is that it is inherently slow and this can affect MPX2 file playback timing. While, therefore, MPX2 reader code can certainly be written using C's high-level file handling functions just as easily as in Basic, I prefer a different approach. I load the complete file into a buffer and then access the events directly via a pointer. As each event is read the pointer is incremented so that it then points to the next item to be processed. Here's a typical example that reads the four byte event count and then increases the pointer by 4:

```
event_count=*(ULONG *)data_p; data_p+=4;
```

In order to avoid continually writing buffer handling routines, I use a buffer ADT (abstract data type) module that allows me to load a named file, ask for the start of the file data, kill (i.e. remove) the buffer, and so on. Listing 2 shows the header defining the functions this module provides, and all I have to do is include this header file in my source and then link my compiled code with the associated buffer module. Listing 3 shows these routines being used to load an MPX2 file and you'll notice that, having checked the file identity, I kill the buffer if the file is not a valid MPX2 type.

Listing 4 is the MXP2 play routine itself. It does the same job as the Basic routine discussed earlier, and the only difference is that I am using an incrementing pointer to move through the MPX2 file rather than reading items through high-level file functions.

CoverDisk files

To start with you'll find the HiSoft Basic 2 example program on the disk. Although this is an unoptimised 'bare bones' example, it is certainly sufficient to get you up and running, and in particular should convince you that Basic really can cope with these sort of song file applications. You'll also find all the C source and header files for a Shell MPX2 file player (written and compiled using SAS C) along with a runable version of the program.

So you've got player routines to examine in both Basic and C on the disk, but these would be of little use unless you were able to convert your Midi files into MPX2 format. At this point there's good news because during the last few weeks while I was preparing this tutorial, I've actually added Midi File to MPX2 file conversion facilities to my Workbench 2+ MidiPlayer program.

It can now not only load and play type 0 and type 1 Midi files but can play MPX2 files and, more importantly, convert any loaded Midi file into its equivalent MPX2 form. You'll find this utility, with documentation, and various example files on the CoverDisk. All that remains now is for you to set up your Midi equipment, dig out your favourite Midi files, and start giving your neighbours a mega-decibel treat!

Jargon help

RKM: Amiga ROM Kernel Manuals – the official Amiga system programming books

pointer – a variable used to store a memory location address. C programmers often tag a '_p' extension onto the names of pointer variables to remind themselves of this fact.

structure offset – a number (or an equivalent name) that specifies the position of a particular field in a block of memory relative to the base address of that block.

allows this to be opened and used in much the same way as an ordinary file.

I also needed time delay facilities, but this presented more of a problem – neither HiSoft Basic, nor any other Basic come to that, provides timer functions that are capable of providing delays of sufficient accuracy. Because of this it is essential to use the Amiga's timer device and this means we need to set up a reply port and an I/O request block for communicating with the timer device (as well as opening the device itself). Before I tackle this side of the problem though, let's examine the MPX2 file playing loop.

Listing 1 shows a program that asks for the name of an MPX2 file and then plays it. Don't worry about the initial code – look at the loop in the middle. What may well surprise you is that once the various setting up and file opening code has been performed, it takes just one loop containing these seven lines of Basic to read and play any sort of MPX2 file:

```
FOR i&=1 TO event_count&
        event_time&=CVL(INPUT$(4,#1))
        POKEL
timerIO&+tr_time+tv_micro,event_time&
        f&=DoIO&(timerIO&)
        event_count&=CVI(INPUT$(2,#1))
        event$=INPUT$(event_count&,#1) : PRINT
#2,event$;
NEXT i&
```

We read the four byte time value from the file [notice the use of CVL() to convert the INPUT$() string into a number], poke that value into the timer I/O request, and perform an Exec DoIO() call to the timer in order to produce the required delay. Having done that, we then use INPUT$() again to read the event size field and once more to read the Midi data block into an event$ string. A PRINT statement is then all that's needed to transmit that block down the serial lines and into your Midi gear. Not bad eh, for seven lines of code!

Because the play loop depends on being able to generate accurate time delays, this brings us to a stickling point as far as Basic is concerned – each version of the language has its own ways of allowing experienced coders to access the underlying Amiga system library routines and devices.

The latest version of HiSoft Basic does, in fact, include a new scheme for doing this and, since you are unlikely to have seen any code of this nature before, I'll explain briefly how it works.

HiSoft have created a set of header files that mimic the system headers used by Amiga C and assembler coders. As well as library function details, these headers also provide 'pseudo constant' definitions of all the important structure offsets. If you look at listing 1 again you'll see near the start of the code that I perform a CreatePort() Exec library function call and then create an extended I/O request block using this function:

```
timerIO&=CreateExtIO&(timerport&,timerequest_sizeof)
```

The returned value, timerIO&, is actually the base of the allocated timer I/O request structure but before it can be used with a DoIO() call various fields need to be set up. Timer I/O requests have to be set up with both a time delay value and a number which represents the command the device should carry out. The command field can be referenced by adding an offset value, defined as IOStdReqio_Command in the HiSoft headers, onto the base address of the I/O request structure.

Another constant defined in the headers is called TR_ADDREQUEST& and this is used to tell the timer device to perform a time delay. With HiSoft Basic 2 we poke a TR_ADDREQUEST command into the I/O request block like this:

```
POKEW timerIO&+IOStdReqio_Command,TR_ADDREQUEST&
```

The final location being poked is therefore the sum of the timer I/O request base address and the command field offset.

In a similar fashion, the four byte event time of an MPX2 event can be poked into the request block using predefined tr_time and tv_micro structure offset values:

```
POKEL timerIO&+tr_time+tv_micro,event_time&
```

Hard going? Well, there is nothing inherently difficult going on here – I'm just poking suitable numbers into particular positions of a block of memory. I will admit, though, that the purpose of this sort of 'jiggery-pokery' can only make sense if you understand the layouts and purposes of the appropriate Amiga system structures, and the same is true of Amiga library function use.

Experience with C or assembler and the RKM manuals undoubtedly comes in handy, but if you are new to Basic then all I can suggest is that you just take the timer code at face value and use it, being particularly careful *not* to inadvertently alter any offset names or variable types!

I have, incidentally, kept the example code as small and as straightforward as possible. In particular, I've not performed the customary checks on things like device opening and I/O request memory allocation functions because these would have made the underlying framework of the code much more difficult to examine. Be warned, however, that in general, the return values of library functions which can fail ought to be checked, and appropriate error closedown paths coded.

```
REM $include exec.bh
REM $include timer.bh
REM $include blib/execsupport.bas

DEFINT a-z : BUMPED_PRIORITY=50
LIBRARY OPEN "exec.library"
timerport&=CreatePort&(0&,0)
timerIO&=CreateExtIO&(timerport&,timerequest_sizeof)
POKEL timerIO&+tr_time+tv_secs,0
e&=OpenDevice&(SADD("timer.device"+CHR$(0)),UNIT_MICROHZ,timerIO&,0)
POKEW timerIO&+IOStdReqio_Command,TR_ADDREQUEST&
INPUT "Name of MPX2 file to play? ",name$
OPEN name$ FOR INPUT AS #1 LEN=5000
OPEN "COM1:31250,N,8,1" AS #2
header$=INPUT$(4,#1) : event_count&=CVL(INPUT$(4,#1))
task&=FindTask&(NULL&)
old_priority&=SetTaskPri&(task&,BUMPED_PRIORITY)
FOR i&=1 TO event_count&
        event_time&=CVL(INPUT$(4,#1))
        POKEL timerIO&+tr_time+tv_micro,event_time&
        f&=DoIO&(timerIO&)
        event_count&=CVI(INPUT$(2,#1))
        event$=INPUT$(event_count&,#1) : PRINT #2,event$;
NEXT i&
e&=SetTaskPri&(task&,old_priority)
CLOSE #2,#1
CloseDevice timerIO& : DeleteExtIO timerIO& : DeletePort timerport&
LIBRARY CLOSE
END
```

Listing 1: Playing MPX2 files via HiSoft's Basic 2

```
typedef void BUFFER;
BUFFER      *CreateBuffer(TEXT *filename); /* returns NULL if request fails */
void        KillBuffer(BUFFER *buffer_p);
ULONG       AskBufferSize (BUFFER *buffer_p); /* returns size of buffer */
UBYTE       *AskBufferStart(BUFFER *buffer_p); /* returns start of buffer */
UBYTE       SaveBuffer(BUFFER *buffer_p, TEXT *filename);
```

Listing 2: The buffer ADT routine definitions used for buffer handling

```
UBYTE LoadMPX2(TEXT *source_p)
{
UBYTE  *data_p, error_number=NO_ERROR;
if (!(g_mpx_buffer_p=CreateBuffer(source_p))) error_number=NO_SOURCE;
else {
        data_p=AskBufferStart(g_mpx_buffer_p);
        if(*(ULONG *)data_p!=ID_MPX2
            {
            KillBuffer(g_mpx_buffer_p);
            g_mpx_buffer_p=NULL;
            error_number=BAD_FILE;
            }
        }
return(error_number);
}
```

Listing 3: The routine for loading an MPX2 file into a buffer

```
UBYTE PlayMPX2()
{
UBYTE *data_p, error_number=NO_ERROR;
UWORD code, event_size;
ULONG delay, i, event_count, task_priority;
if (!g_mpx_buffer_p) error_number=NO_SOURCE;
else {
        task_priority=SetTaskPri(FindTask(0),BUMPED_PRIORITY);
        data_p=AskBufferStart(g_mpx_buffer_p); data_p+=4;
        event_count=*(ULONG *)data_p; data_p+=4;
         g_timer_request_p->tr_time.tv_secs=0;
        for (i=0;i<>event_count;i++)
                {
                delay=*(ULONG *)data_p; data_p+=4;
                g_timer_request_p->tr_time.tv_micro=delay;
                DoIO((struct IORequest *)g_timer_request_p);
                event_size=*(UWORD *)data_p; data_p+=2;
                g_serial_request_p->IOSer.io_Length=event_size;
                g_serial_request_p->IOSer.io_Data=(APTR)data_p;
                DoIO((struct IORequest *)g_serial_request_p);
                data_p+=event_size;
                        }
                }
        SetTaskPri(FindTask(0),task_priority);
            }
return(error_number);


}
```

Listing 4: A typical C code routine for playing MPX2 files

Plug into the Amiga

star letter

Here's an idea. I use Macs and PCs fairly regularly and am extremely impressed by the idea of plug-ins. For those who don't know, plug-ins are pieces of software, like datatypes for the Amiga, which can be added to any program that supports them.

For instance, Kai's Power Tools on the Mac is a plug-in for extra image processing effects. It not only works with Photoshop, but also with Quark XPress, the foremost DTP program in the world. This means that you get Kai's Power Tools effect within XPress, without having to take your images into Photoshop first.

Wouldn't it be great if ADPro worked the same way? Then we could use its loaders and operators inside packages like Wordworth and PageStream. I think that if Commodore ever gets resurrected, one of the first things it should do is try to get some sort of standard set up.

William Russell, Colchester

Plug-ins are indeed a superb idea. However, it seems that none of the Amiga software companies are too willing to talk to one another when it comes down to it, so, as you say, a standard will probably need to be set by whatever entity Commodore becomes.

That being said, I think the 'new Commodore' will have other things on its collective mind than plug-ins. Like getting machines into shops for instance. But perhaps LightWave will lead the way as the new version supports plug-ins, but unfortunately not the standard ones used by 3D Studio, Photoshop, et al.



Faulty FastRAM

While reading your April letters page, I found a striking similarity between the situation experienced by Mr. Colin Smith and myself.

I ordered a 4Mb RAM board from Siren Software back in December. Upon receiving it I found it to be faulty and sent it back, demanding a refund. I expected to receive one soon – if the goods are faulty the company must cough up. It was several months and phone calls later before I was offered any sort of refund, and they suggested a credit note to the value of the board. After such a long wait I was in no mood to try my luck again. After all, who's to say the second wouldn't be faulty too?

I took a trip down to my local trading standards office for a chat. They said that if the company maintained that the goods were not faulty, they (Trading Standards) could do no more for me. It came as no great surprise when they later informed me that they had received a letter from Siren Software saying I had returned goods which worked perfectly.

In the end I got my money back. It was a long complicated process which I don't want to bore you with now. Suffice to say, I won't be dealing with Siren Software again.

Please print this, as I see no reason why anybody else should go through the same struggle. Expanding your machine should be fun, not a constant worry about your legal standing.

Kenneth Lyon,
klyon@touchdwn.demon.co.uk

I appreciate the difficulties you have had with Siren, but would just like to ask why you felt it necessary to 'demand' a refund. We don't live in a perfect world and it wasn't necessarily Siren's fault that the RAM didn't work in your machine. What was the matter with them simply sending you a replacement SIMM? That having been said, you do seem to have had an awful lot of trouble actually receiving a refund, which is not good in anybody's book.

Compact congratulations!

Congratulations on the first CD for the Amiga that is really worth mentioning. Any qualms of yet another software letdown were swiftly dispelled when I switched on my A1200 with the CD Toolbox in situ.

Terrific! More of the same please, even if you do have to up the cost of the mag in consequence – it would be worth it, at least in my opinion.

Just to reiterate, well done AC!

Frank Doswell, Crawley

Blush! Gosh, thanks. We do try our best. As to raising the cover price of the magazine, I'm sure the majority of our readers would have to disagree with you there

Booklet blunder

Please can you help me? I have just purchased an Amiga 1200 and a friend has lent me some booklets which I would love to be able to purchase: Amiga Answers, Mastering the Amiga, Amiga Format

If you could let me know the cost I will send a cheque by return.

Deryck Marston, Leicester

Well, Deryck, if I remember rightly, the first and last booklets you mention were published by our Bath-based competitor, Future Publishing, while the second one was published by Bruce Smith Books who can be reached on 01932 894355. Good luck with your new machine.

I just can't get enough

I'd like to disagree with Mr. Hawkins' views in March's issue of *Amiga Computing*. I use LightWave every day and find that only *AC*'s coverage of the various add-ons for it are in-depth enough for my liking. I say more LightWave!

I would also be extremely keen on a tutorial series like your Publishing column, not just the more general 3D page, but something to get your teeth into. My only other problem is getting hold of the items you review. It seems that the only UK supplier is Premier Vision and they charge too much and don't carry enough stock. Perhaps you can suggest some other dealer?

Mike Perrie, Sunderland

The lack of UK availability of some of the LightWave-related products we review can be a problem, especially for readers without a credit card, but we can only hope that as LightWave gains further ground in this country, their will be dealers springing up to offer UK users the software they want.

As to the likelihood of a continuing tutorial for LightWave users, I think it is unlikely at the moment, unless, as per Mr. Hawkins suggestion, we do change our name to LightWave Computing!

A clean bill of health

I would just like to say thanks to Frank Nord for his Amiga Medical articles. They have helped me no end with configuring my system, which consists of an Amiga 1200 with 65Mb hard disk. As I run lots of programs that have an ARexx interface, his advice on moving the REXX: directory has proved invaluable.

Bill Reason, Northwich

Frank says: I'm glad my hints have proved useful to you. They were culled over a great many years of messing around with not only my own Amiga, but other people's, to make things run a lot smoother, especially for people without a technical bent.

Net worth

Thanks very much for the Demon Internet CoverDisk – it was superb. I had been contemplating having a go on the Internet and this was just what I needed to push me into it. AmigaNOS is somewhat complicated in use, but I've found that as long as you leave it pretty much alone, although you might not get the best performance from it, at least it actually works.

It does seem a little strange that you have to edit three files to change the newsgroups you subscribe to, but ours is not to reason why. My next step is to jump to AmiTCP thanks to the hefty article you published last month. I just hope I find it easier than AmigaNOS, (I can't wait to use Mosaic though). Finally, keep up the good work. *Amiga Computing* is by far the best of the Amiga mags; all the others either aim too high, or too low. Yours has just the right balance between the two.

Kevin Bryant, Southall

The response to the Demon freebie has been phenomenal. We have been inundated with e-mail and snailmail to the effect that it has been the best giveaway any magazine has ever put on the cover – ever. We assume from this that you lot actually quite liked it.

040 1200?

I have an Amiga 1200 and I have been saving up for ages to buy an accelerator card for it. But now I am worried that a 68040 accelerator will become available and I will have bought the 68030 one. Can you advise me on what to do?

Mr B Caldwyn, Falmouth

Rest easy Mr Caldwyn, there won't ever be a 68040-based accelerator for the A1200 unless someone can do something about the size of the 68040 chip and the amount of heat it generates. Get your 68030 board by all means and try to get one that offers two SIMM slots, if possible, as they offer more flexibility when it comes to upgrading your RAM.

AGA flicker

After having 'upgraded' from my A3000 last year to an A4000/040, I find it really annoying that I need to have two monitors. I kept my NEC Multisync from my A3000, but the A4000 doesn't have a built-in flicker fixer so I've had to buy a 1084S monitor to play games and use programs that don't promote to my EGS Spectrum or DoublePAL (which is horrible anyway).

Are there any companies out there making a flicker fixer for my A4000? I have ➤

Commodore worries

I have been a loyal Amiga owner for the past four years, but am wondering whether or not to keep up my commitment. I have a 1Mb A500 with Workbench 1.3 and a second floppy drive, but am looking at buying a 486-based PC. Commodore just don't seem to be getting back together, and the games companies are dropping the Amiga like a rock, unless you have an A1200. Why can't they convert the games from the A1200 to the A500. I'm sure there must be many more A500 owners out there than A1200 ones.

Matt Coverton, Slough

To be brutally frank with you Matt, your 'loyal commitment to the Amiga' doesn't strike me as that impressive. There are many Amiga owners out there who have spent a great deal more money on their systems. The bottom line with all these PC versus Amiga arguments is, does the machine do what you want it to? If it does, it doesn't really matter that some people call it obsolete, it suits your needs.

If you want an A1200, Matt, go out and get one, there are certainly plenty of people who are willing to sell their machines, but if you want to get a PC, then I guess we probably won't be hearing from you again. As for your complaint about games, there certainly are more A500 owners around at the moment, but the games companies like the added power and memory that come as standard in an A1200, not to mention the fact that games on the PC can be converted much more satisfactorily to an A1200 thanks to its increased graphic abilities.

Sex-net?

With reference to the letter by James Radcliffe and your reply, I would just like to point out that although porn is indeed widely available on the Internet, via the alt.sex.* and alt.binaries.* newsgroups, I wonder how many of the people who winge on about "vile perverts on the Internet" have actually taken the time to try and find these resources.

First of all, as stated by Ezra, you have to have a dial-up connection to the net, then you need to be willing to suffer an increased phone bill, the cost of downloading all those large pictures, and lastly, you need some way of viewing these pictures in a high resolution, true colour display. It is extremely unlikely, perhaps even impossible, to see anyone coming across this material accidentally, much less so than traditional pornographic materials in this country, namely newspapers, magazines or videos.

It seems that the national tabloid press in this country is scare mongering and pandering to the David Alton's of this world who would like to 'protect' us from the vaguest dangers. Censorship is not the answer in my opinion, but education. Bring information to people, not propaganda and dogma.

Reading back over the last paragraph, I sound like a raving nutter, but it's because I am passionate about protecting our rights to self-censorship. Personally, I have no interest in the newsgroups mentioned, but there are people who do. It doesn't bother me that this is what they are interested in and in my opinion, nor should it interest the government.

Adam Savant, Ealing

It seems like you have made quite a study of this subject Adam. I agree with you about the national media, but I think the topic is much further ranging than you give it credit for. There is definitely some material floating around the newsgroups that has serious repercussions in the real world.

Take Jake Baker as an example. He wrote a sadistic story about one of his fellow students and is now being prosecuted. There are people saying that this was a representation of his mindset, and there are those who say it was merely fantasy and harmless. Either way, it will mean a greater concentration of interest in the sex-related aspects of the Internet. Whether this leads to outright censorship remains to be seen, but the upshot is that there are people in power who are looking very closely at the topic.

I think you are right when you say that education is the way forward, but that would require a political party in power that was willing to look past the next general election and concentrate on a time maybe 20 years in the future.

been offered an A2320 flicker fixer from an A2000 but a friend said that it wouldn't work properly in my A4000.

David Style, Northampton

You are in luck, David. Power Computing's are producing an AGA flicker fixer which we will be reviewing very soon. Alternativel, you could use the A2320 flicker fixer, but you wouldn't be able to see any HAM8 screens on it.

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to reading your letters and selecting the most interesting for publication. Drop him a line at:

Ezra Surf's Postbag , Amiga Computing Adlington Park, Macclesfield SK10 4NP

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

Printer problems

I have just bought a Canon BJ-C4000 to go with my 6Mb Amiga 1200, but am pretty disappointed with the results I am getting from the standard Work-bench printer drivers. What am I doing wrong?

Steve Jones, Walthamstow

You probably aren't doing anything wrong as it goes Steve, but are you using cheap photocopier paper? It's fine for test prints, but you should really get some proper inkjet paper for the best results.

The other thing to get would be Wolf Faust's Studio II printer system. This gives the best possible quality output for nearly all printer types and does so by bypassing Workbench's rather crude printer.device and replacing it with true 24-bit output. Studio II is available from JAM on (01895) 274449.

Amiga bugs?

Watching the BBC TV program 'Bug', I noticed they seem to be using 1084 monitors for an awful lot of screens, but there seem to be PCs controlling them. Does this mean they are using Amigas for the production of the graphics or are there PCs that can use the 1084?

Julia Smith, Oldham

What quite often happens is that the production company want the machines producing the graphics to look like PCs, so they put a PC on the desk with its keyboard, mouse, etc., but under the desk there will be an Amiga pumping out the graphics.

The reason for this is that the Amiga can put out a video signal at the same speed as the video camera reads it in, so you don't get any of the deeply ugly horizontal bands crossing the screen that you so often see when actual PCs are shown on television.

Manual woes

I recently acquired an A500 upgraded to 1Mb. As a complete beginner with computers and trying to learn BASIC, I was very pleased to see Easy Amos on the CoverDisks of the Christmas '94 edition (issue 81). My first disappointment was getting a 'Sold Out' letter in reply to my order for the user's manual, as it had been described as "Vital to get past the basics."

I partly accepted the fact that this might be the case as we are two months behind you in getting the magazine. I tried a different approach by contacting a relative in the UK to get me the full program, but she was told that the program was obsolete, and that she had no chance of getting a copy. Europress told her the same story.

The question I would like answered is: Why is a CoverDisk advertised with such glowing terms and all the time, after buying your magazine on the strength of it, is obsolete so I cannot follow through with what is obviously agood language?

M F Jacquemin, Kelmscott, Western Australia

Firstly, I would like to say that Easy AMOS hasn't been made obsolete by another program. It is still just as useful and powerful now as the day it was released. Having said that, it is no longer sold, and unfortunately, as has been said in the letters pages before, Europress ran out of the manuals very swiftly, and won't be printing any more.

Amstrad Amiga

I've just seen an offer to get an Amstrad NC100 at what seems a very reasonable price. It would be ideal for me to sit on the train writing my correspondence then download it to my Amiga for final preparation and output. Can you tell me if this is possible, and if so, how?

Simon Robertson, Dulwich

First off, Simon, see if the place that's letting these NC100s go cheap have any NC200s for sale. The NC200 has a standard high density 3.5" floppy drive that will format high or double-density PC format disks which can then be used with your Amiga, provided you are either running Workbench 2.1 or higher, or have a copy of CrossDos, MessyDos or DOS2DOS.

If they don't have any NC200s you can still use the NC100 with your Amiga, but the process is a bit trickier because it works via the serial port of your computer. Either way, they make a great (and inexpensive) alternative to PC-compatible laptops, and the word processor on the NC100 and NC200 is none other than a version of that Amiga favourite, Protext.

CD-ROM or bust

I know that Commodore has disappeared, but do you think the CD1200 will be high on whoever takes over Commodore's list of things to do? I do want to buy a CD-ROM for my A1200, but would rather have Commodore's own model rather than some third-party CD-ROM that probably won't be compatible with my Amiga.

Also, I keep seeing CD-ROMs on the cover of various PC magazines and was wondering if I could use anything from them as they are usually a lot cheaper than the Amiga CD magazines.

Alan Barton, Chelmsford

I think you would probably be better off just going for the excellent Squirrel SCSI interface and an external CD-ROM drive with Amiga CD32 emulator rather than wait for Commodore to be resurrected. The tests we have run on third-party CD-ROM drives have proved to be fairly successful in the main when it comes to running CD32 software.

The only problem lies in the fact that most CD32 programmers don't bother to check the hardware they are going to be running on so there might be memory conflicts, but this is down to the individual programmers and I'm sure that now there are several CD32 emulations available, they will be working on these aspects of their craft a little more from now on.

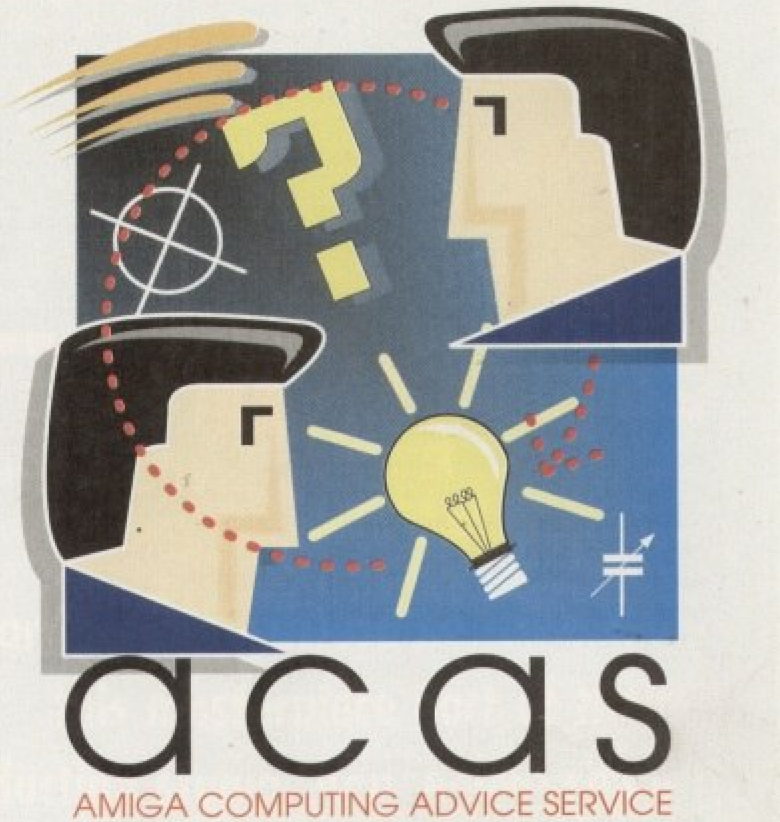
As to the usefuiness of PC CD CoverDisks, you should be able to get some stuff off them with no trouble. If you want to go to the bother of setting it up, you could run Xanim to show quicktime and AVI movies from the disk (or TAPAVI if you were lucky enough to own a Picasso graphics card), and there are datatypes aplenty for the support of pictures like .BMP, .PCX and Jpeg, and sound samples in various different formats including .WAV, .VOC and MacSound.

These are all available on the Aminet and if you get a CD-ROM drive you can save yourself an enormous phone bill by buying the Aminet CD Set 1 which contains practically every single file ever uploaded to the Aminet. You obviously won't be able to run any of the programs directly on your Amiga, but you could try PCTask 3.1 which is a software-based PC emulator, but be prepared for it to be very slow.

Get writing!

In the last survey more than half of you said that you wanted more of the letters pages. That's fine, as long as you readers increase your output too. Send us your letters by the sack full and we will be only too pleased to bump up the number of pages devoted to letters.

The dispeller of despair, the light at the end of the dark tunnel. Yes, it's the ACAS pages in time to save all you anguished Amiga owners in need of help



Virus info

As a pensioner and new to the Amiga 1200, I would like to ask some (hopefully not too obvious) questions about something I have heard much about – viruses.

Am I right in assuming that all viruses stick to a disk which is infected and are not destroyed if the computer is switched off for a while and the infected disk loaded again?

If they are as widespread as I think, how come commercial companies have not researched anti-virus techniques they can put on their disks to stop a virus from getting on it in the first place?

I am sorry if you are asked these questions all the time from beginners such as I. I have asked my grandchildren but they are into these consoles and haven't got a clue what I am talking about.

C Burley, Dronfield, Sheffield

Don't worry about asking questions in this magazine, no matter how obvious you may think they are. We all started out as beginners and only graduate further by asking such questions.

As for viruses, bah, a pox on all virus programmers, that's what I say. They should all be rounded up and have their Amigas replaced with a ZX81.

You are right in assuming that a virus 'sticks' to a disk and is not destroyed. This is because it is simply written to the disk, usually in the boot sector, and stays there unless it is erased with a virus killer program. It will therefore remain on the disk and will re-infect your Amiga, and other disks, if it is inserted.

Commercial software companies check their software for viruses prior to sending their master disks off for duplication. It is generally down to the user to ensure that infected disks are not placed into the machine.

To safeguard against viruses, take heed of the following:

1. Always write protect your disks, particularly commercial software such as games. Most commercial software seems to come write enabled these days, even though data will not have to be written to the disks. Only remove write protection if you need to write to the disk or if you are instructed to do so by a message.

2. Always check new disks, especially those given to you by friends.

3. Make sure you run an up-to-date Virus Checker program, for instance, John Veldthuis' Virus Checker, which is currently at v6.52. This should be available almost anywhere including the Aminet, BBSs and Public Domain libraries.

Hard case

Please can you help me. I would like to know if I could put my external 3.5 Overdrive hard drive into my computer. I know I have to buy a special lead for this and the case would have to be cut.

Will the drive run slower using the internal plug, and are there any other problems I should know about before I decide what to do?

Would it be better to sell my Overdrive and buy a 2.5 size drive instead – however, I find these drives are slower and more expensive. I was thinking of using my PCMCIA port for a SCSI CD-Rom. I could plug a hard drive onto the chain but I heard they don't autoboot. Is this true and is there a way of making it autoboot? I would be very grateful if you could answer these questions.

Keith Whitefield, Suffolk

I highly recommend you sell your 3.5 drive and invest in a PCMCIA SCSI interface – the Squirrel SCSI adapter from HiSoft. I have used this device and can confirm that it is quite capable of autobooting, with the manual having a clear step-by-step description on how to set it up properly.

The manual is excellent in general, with clearly written information on connecting and using SCSI devices. HiSoft also have a great technical support department should you have any problems with your product.

I did a few tests to check the speed and found that on average, a standard internal IDE drive had a transfer rate of about 730k a second. I then tested a 130Mb Quantum SCSI drive connected via the Squirrel and this had a transfer rate of 950k a second. This extra speed is noticeable in use too. Compared to the IDE drive, opening a directory window on the SCSI drive was much faster.

Also, SCSI hard drives are relatively cheap, easy to obtain and the higher the capacities, the faster they seem to go.

Add to this the fact that you can connect up to seven different SCSI devices, such as CD-ROMs, scanners, DAT tapes, tape streamers and many other useful devices, and you realise that the Squirrel is well worth the £70. HiSoft can be reached on 01525 718181.

MMU please

I have recently bought a 68030 accelerator upgrade board from a friend – the board is a DKB 1240 and the CPU on the board is a

Shields down

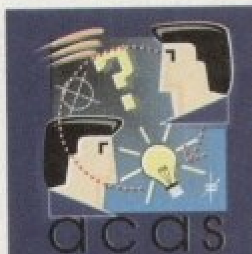
Recently, after fitting an IDE internal hard drive to my A1200, I have been getting strange lines flashing on my screen. These appear as horizontal streaks which flash rapidly and gradually become worse.

Things are OK for about five minutes after first turning on my A1200, but I eventually have to switch my A1200 off and reboot. During the fitting of my drive, I realised there was something rattling inside the motherboard casing so I removed the metal casing and discovered a piece of (non-conductive thank God) plastic. I did touch a couple of chips during the removal of it but was wearing an anti-static wrist strap at the time. What is happening and is there some way I can fix this?

S Harvey, Warrington

When you had finished chasing the little piece of plastic, you did replace the metal cover of the motherboard didn't you? This metal casing is vital to keep stray electronic signals under control. There is a temptation to leave this shielding off for easy access should the need arise.

It sounds like your A1200 is being affected by such stray signals and you should ensure that the casing has been completely replaced.



Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your Amiga software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a thorough description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

Any questions?

➤

68EC030. I understand that this chip does not have the Memory Management Unit feature of a full-blown 68030.

Can I simply buy a full 68030 chip and replace the 68EC030 on my board so that I can have MMU capability? I need this as I have a virtual memory utility which requires a CPU with MMU.

M Hardy, Liverpool

If only life was so simple. Unfortunately, MMU features are not merely provided by the CPU. The actual upgrade board requires specific MMU circuitry too. You will therefore have to buy a completely new board if you want MMU capability. What a drag huh?

Internet advice

Please help: I am getting conflicting advice! I own an Amiga 500 with 1Mb RAM: and Workbench 1.3, and I want to access the Internet. One bit of advice states that I can use Workbench 1.3, but I will also need a hard drive, the other states I need Workbench 2.04 minimum, but no hard drive, although it would be preferable. Who, if anyone, is correct, I need to know before I start spending money.

D G W Griffith, Cheltenham

According to Demon Internet Services, the minimum requirement for AmigaNOS is actually Workbench 1.3, but they don't recommend it. They also say that a hard drive is an absolute necessity, along with ARexx, and you really need more than 1Mb of memory.

To be honest with you, your best bet would be to try and find someone you wants an Amiga for playing games on, and sell your machine to them. Replace it with an A1200 with a hard drive and not only will you gain ARexx, Workbench compatibility and the necessary hard drive, you will also have a machine with more colours, more memory and greater speed.

Upgrade angst

I have an A500+ with 2Mb RAM and a Citizen 224 colour printer. Could you please tell me a good, cheap way of upgrading my A500+ to an A1200 or A4000? If there is no way of doing this, I will probably get a second-hand PC.

Kieran Madden, Welwyn Garden City

There is only one way of upgrading any machine to an A1200 or A4000, and that is to sell your current system and buy one. You should be able to find a second-hand A1200 for around £300 with no great trouble. 4000s are more expensive and also harder to come by, but easier to expand in the long run.

I doubt you would get a comparable PC, even second-hand, for £300. By the way, if you do choose to stick with the Amiga, your Citizen printer will still be perfectly compatible to whichever Amiga you decide to get.

Bookworm

I am a dedicated Amiga user (not a game player) and am looking for Amiga books, but seemingly without success. Most shops seem to stock endless PC books, so could you help me with a list?

I. Ward, Cleethorpes

Your best bet to getting Amiga instruction books lies in Mail Order. Here are the numbers for Bruce Smith Books, who produce an awful lot of Amiga books, and for Computer Manuals, who are one of the biggest distributors of computer manuals.

Bruce Smith Books: 01932 894355

Computer Manuals: 0121 706 6000

Sample seekers

I have an Amiga 500+ and want to know more about sound samplers:

1. What is a sound sampler?
2. Can I plug a microphone into one and record speech?
3. Can I take recordings from a tape recorder and play them in?
4. Can you use the samples with a Sound Tracker?
5. What is a Sound Jammer?
6. I've got a budget of £30, which is the best for my money?

Colin Knowles (Age 11), Tring

You've come to the right place, Colin. Here are the definitive answers to your questions:

1. A sound sampler is a device that accepts input from an analogue playback system, like a tape machine or CD player, and slices it up so finely that it can be represented digitally on your computer.

2., 3. & 4. Yes, yes, yes!

5. I give up, what is it?

6. The best sampler for £30 or less is probably TechnoSound Turbo 2, but if you can save up a bit longer, a much better buy would be GVP's DSS8, which is available from Silica who can be contacted on 0171-580 4000.

Did you say mooey?

I was wondering if you or any of your readers could help me find some programs I was looking for:

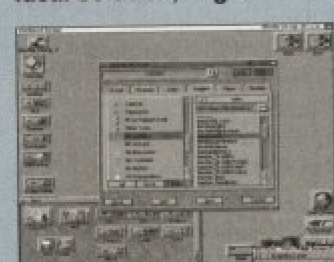
1. I am trying to locate a program called MUI – Magic User Interface.
2. Any program that can convert IMG Clip Art to standard IFF format.
3. A program that will help me make anim files from collections of IFF pictures. I have tried MakeAnim but could not get it to work as it kept crashing my machine – I may have a faulty copy.

All the programs must run on my system which consists of an A500+, 4Mb RAM, 40Mb hard drive and A570 CD-ROM.

David Elliott, Lincoln

Well, David, my answer to the first and last questions is the same – get hold of a copy of the Aminet5 CD-ROM. This contains MUI23usr.lha (in the dev/gui directory) which is the latest version of the Magic User Interface, along with a host of programs that use MUI. It also contains MainActor1_55.lha (in the gfx/edit directory). MainActor is possibly one of the best animation editing packages ever, and it's shareware.

Now, as to your second question about IMG clip art, it's possible there is something on the very same Aminet CD, but I haven't been able to verify it. However, Wordworth 3 and PageStream 2 both support the importation of IMG clips, and if you are really stuck for something to convert them to IFF, you could always screen grab Wordworth or PageStream's screen once you have imported a clip. Not an ideal solution, I agree.



Magic User Interface's extremely flexible configuration program in action



MainActor is also useful for producing animations for PCs with support for the .FLC format

public sector



Dave Cusick once more wanders through the wallet-friendly world of PD and shareware

Admittedly, I rave every issue about the high quality of submissions, but this really has been a bumper month for Public Sector. Not only have dozens of disks arrived, but plenty of them are thoroughly deserving of review and unfortunately they simply cannot all be squeezed in. If you have sent something in recently but it's not yet been featured, please be patient because it may still make an appearance. Meanwhile, without further ado let's take a look at the cream of this month's PD crop...

GAME of the month

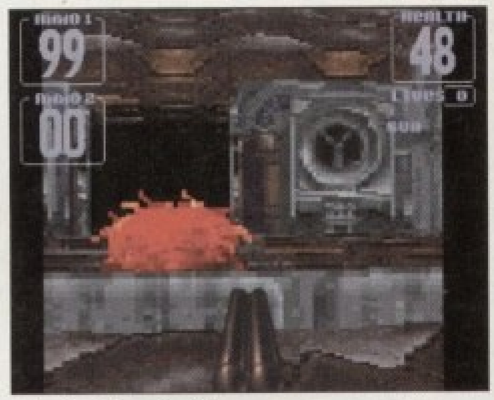
Fears 2 AGA

Produced by: Bomb Software
Available from: SAdENESS PD

A year or two ago a bunch of us were round at a friend's house. It was about two or three in the morning, everybody had consumed the contents of a fair few cans, and one of our number was soundly sleeping off the consequences of doing so. All at once, our host led us to his over-priced, underpowered 386.

After a mildly entertaining 15 minutes speaking backwards into his sound sampler and then reversing it to see if the message was comprehensible, we were persuaded to take a look at PC flavour of the month, Doom. And much though I hate to admit it, I was quite impressed.

Since then, plenty of brave programmers have attempted to emulate on the Amiga the wonderfully smooth texture-mapped graphics, wholesome sound effects, and

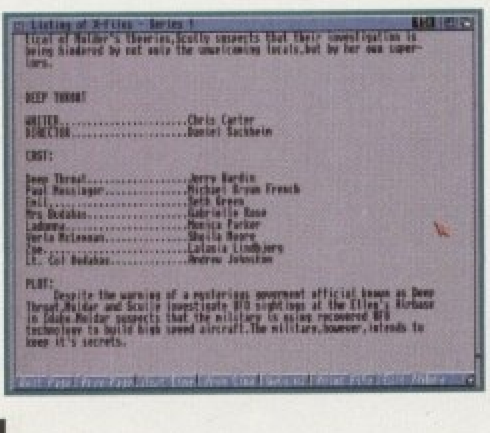


Die alien beastie thing

X-Files Guide

Produced by: Various
Available from: OnLine PD
Disk No. OI13

It's official: the cult TV series of the moment is no longer 'Star Trek: The Next Generation.' That's been succeeded by 'The X-Files' which regularly attracted around eight million viewers on BBC2 when the first series was shown earlier this year.





Amaze your friends with obscure facts about Scully and, erm, the other one

The growing number of X-Philes are making their presence felt and the second series, currently being screened on satellite TV, is scheduled to hit terrestrial telly some time this autumn.

If you're one of the 50 million people on this fair isle who are as yet unaffected by the series and you're feeling a little left out of certain conversations as a result, here's the opportunity to brush up on your background knowledge and astound your sci-fi loving chums. This disk contains a selection of text files that some enterprising soul has downloaded from an on-line X-Files site.

Included are episode guides for the first series and some of the second series, FAQs (answers to Frequently Asked Questions), background on the characters, and other information that will make X-Philes' eyes bulge. The question is, how long can you hold out before you too become one?



Birthdate is a veritable mine of trivial but fascinating facts

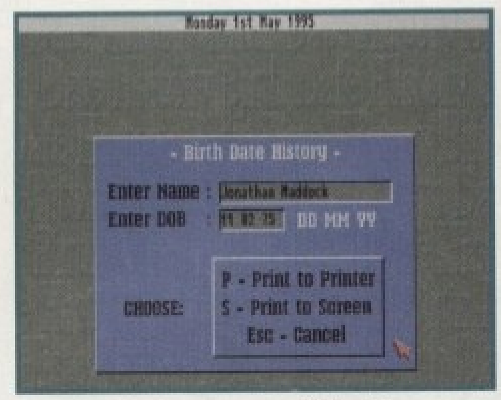
Birthdate History

Programmed by: John L Devoy
Available from: OnLine PD
Disk No. OU98

On the day I was born, the Chinese city of Tangshan was devastated by an earthquake measuring 8.1 on the Richter scale. A pint of beer cost about 33p, Gerald Ford was President of the United States, and John Lennon celebrated his 36th birthday.

This stream of facts, which is beginning to sound like a 'Going For Gold' tie-breaking question (only rather more difficult, obviously), is courtesy of the tremendously informative Birthdate program.

Simply type in your date of birth and you will presented with a whole host of facts including newspaper headlines from that day, celebrities who share your birthday, popular films and songs of the time, world leaders, the cost of living, the results of the year's major sporting events... in fact, all



Simply enter your name and date of birth and the program does the rest

manner of fascinating details. An astrological profile is also presented which, in the cases of the people whose birthdays I tried out, spookily seems to be pretty accurate.

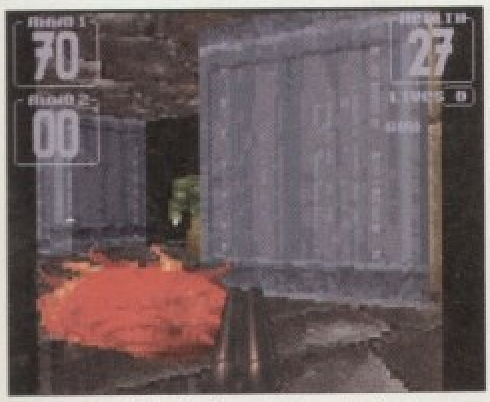
All this information can be printed out if desired so you can generate birthdate fact-files for family, friends, close neighbours and innocent unsuspecting houseguests.

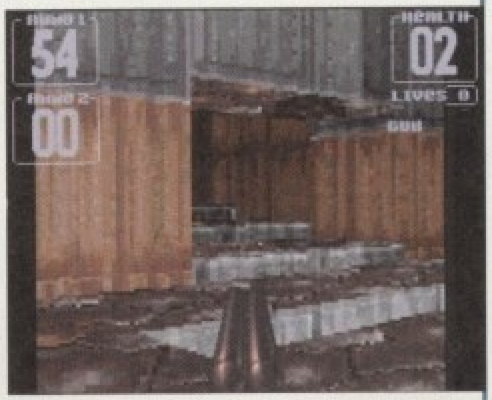
This is certainly an excellent idea which has been well thought out and implemented, and as a consequence, Birthdate is sure to prove extremely popular.

By sending a £6 registration fee to the author, you can also own a fully functional version of BMaster, a configuration program which allows you to tweak the Birthdate output to your heart's content.

highly addictive walky-blasty gameplay. Unfortunately, much to the delight of PC-owning friends, few such efforts have been up to the high standards of the original. Now, at last, that situation has changed.

Fears 2 is technically stunning and thoroughly enjoyable to play. Admittedly, this is a game of mindless violence which looks like becoming the new generation of games super-consoles as Streetfighter 2 was to the SNES. But don't let that put you off, because Doom was a hugely superior product and Fears 2 is a faithful reconstruction. This is the best Amiga game for some time, and it should certainly be a part of everybody's collection.


That green bloke is begging for a bullet


What's up these stairs I wonder?

Speak to me...

...if you have any program, whatever its purpose, which you consider worthy of review. Whether it will be freely distributable public domain, shareware or licenceware, if you feel it's of sufficient quality to merit coverage then stick it in a jiffy bag or padded envelope and send it in with all haste. I promise I'll at least look at your work. Please clearly label the disk, and include a cover letter supplying a description of the disk contents, price and some basic instructions. The address to send the disks to is:

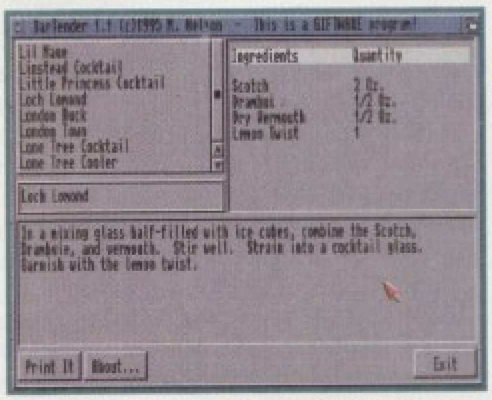
Dave Cusick
PD submissions
Amiga Computing
Media House
Adlington Park
Macclesfield SK10 4NP

Bartender

Programmed by: Mike Nelson
Available from: 17 Bit Software
Disk No. F1-074

Bartenders in cocktail bars are immensely annoying people. They possess the ability to remember scores of complex recipes, juggle glasses and cocktail shakers without ever dropping them or spilling their contents, and create two cocktails simultaneously while also coming up with exactly the right change from that tenner you gave them.

Now you have the opportunity to imitate them with this database of 1000 recipes, although it's probably still not a good idea to go straight into all the flash shaker-throwing routines. Included with such favourites as the Bloody Mary, the


Become the toast of the cocktail party fraternity with Bartender

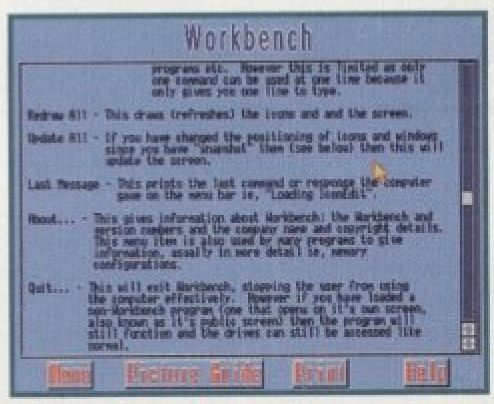
Screwdriver and the Harvey Wallbanger are more obscure offerings such as the Presbyterian, the Dixie Stinger and the Shamrock.

All sorts of ingredients are involved, but there are no fewer than 18 recipes based on bourbon, 16 based on rum and 21 based on brandy. The recipe list can be scrolled through or the first few letters of the desired cocktail can be keyed into the text gadget and the program will locate it. Each recipe includes a quantative ingredients list and mixing instructions, and can be printed out for convenience.

As the author points out, your liver might not thank you for getting hold of this disk, but I reckon a few of your friends might.

Amiga Assistant

Programmed by: John Cumming
Available from: F1 Licenceware
Disk No. F1-074


It may not look like much, but there's a wealth of information within Amiga Assistant

I wish there had been programs like Amiga Assistant around when I had just bought my machine. I'd made the switch from an Atari ST and the intricacies of Workbench baffled me totally – the standard Commodore guide being about as much use as a bicycle would be to a fish.

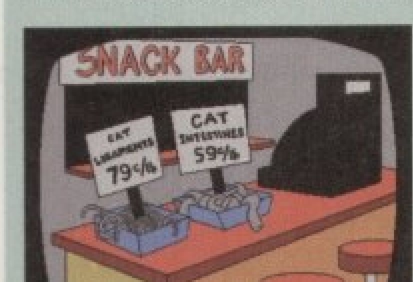
On offer here through the simple graphical interface is the total demystification of every aspect of Amiga ownership. Information on the various machines, a brief guide to using Workbench, how to create and use icons, the usefulness of scripts, information on monitors and

The Itchy and Scratchy Show #2 and #3

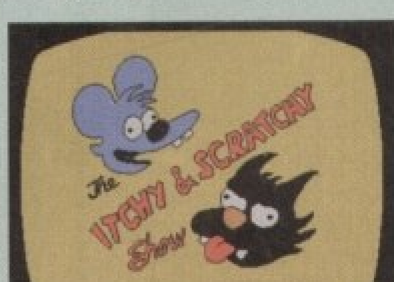
Programmed by: Chrome Australia
Available from: On-Line PD

The first of these two very professional cat and mouse mini-cartoons is entitled 'Kitty-Kitty Bang-Bang', and sees the two loveable beasties battling at a bowling alley. The second, the charmingly titled 'Germs of Endearment', sees the cat coming to the mouse to have his tonsils removed, with a similarly comical outcome. The bright graphics are excellently drawn and the animated antics are accompanied by a superb soundtrack, with cheesy title music ('It's the Itchy and Scratchy show' sung in chipmunk-like voices), silly sound effects and suchlike combining to produce a top-quality cartoon.

The only problem is that the animations are both pretty short, lasting only about 20 or 30 seconds before looping. Fortunately, I'm a firm believer in quality rather than quantity and can certainly forgive this, because these are two excellent little cartoons. They are humourous, polished animations which come highly recommended.



My, what a tempting selection of treats for the tastebuds



Cartoon comedy from the cat-and mouse team


I didn't realise having your tonsils out could be such a painful experience

printers... the list goes on and on. For those baffled by buzzwords like multimedia and abbreviations such as ECS, Risc and Jpeg, there's also an invaluable jargon-buster which explains things simply and effectively.

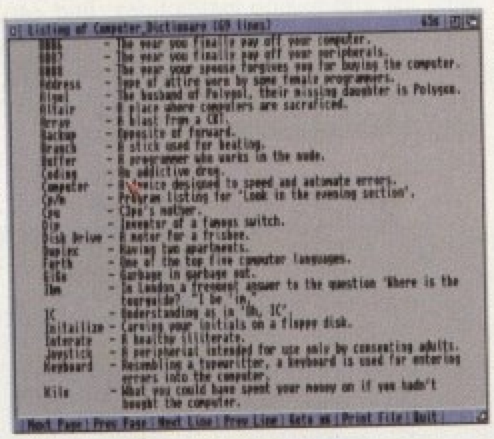
A quick half hour with this and even the most daunted newcomer will know roughly what's going on. What's more, the program can print out text so you can have it on hand when required. This is the sort of disk that should be bundled with every new Amiga.

Joke Disk

Produced by: Leejan Enterprises
Available from:17 Bit Software
Disk No. 3649

Wahey, it's 877k of good, not-so-clean fun covering a multitude of topics as diverse as programmers, religion, telephones, electronic sex, and getting old. Limericks, one-liners, and lengthy stories are all here. Don't expect them all to be in good taste though; there are some pretty sick jokes among them and unfortunately a fair few racist ones too – a good deal of them in one 25k file called One-Liners that will offend practically everybody at some point. But elsewhere on the disk there are also some very clever bits that will have you smiling. Among the more off-beat inclusions are amusing insurance claims (I collided with a stationary truck coming the other way), exam answers (Three kinds of blood vessels are arteries, veins and caterpillars), and an imaginary application form for a Polish motorcycle club. There's also a lot of other pretty funny stuff which couldn't really be printed in a respectable family publication such as *Amiga Computing*, and to be honest not everybody will find the contents of this disk to their liking.

Being compiled in Australia and featuring a lot of American material, it can also seem slightly alien at times, although this isn't really a major problem. If you're easily offended then please beware, otherwise you may find something here to raise a chuckle.



Comedy computer definitions from the Jokes Disk

GCSE Maths Exam Papers

Produced by: Thanh Quan
Available from: Freestyle PD

For thousands of schoolchildren across the country, May and June will be very traumatic months. By the time you read this, it will be too late for them to do anything but worry about mistakes they know they made and questions they have since realised the answers to.

It might not have been such an ordeal for them had they realised this little beauty was out there waiting for an opportunity to improve their grade. Questions from a past paper, or from six of them if you pay the registration fee to the author, are put to the student and if necessary gentle hints are given so that the correct answer is reached.

This is an extremely friendly and useful piece of software which oozes professionalism throughout. This is partly due to the attractive and intuitive interface which makes the program a pleasure to use. It's clear time has been spent on the design so that rather than struggling against the interface, the student can simply get on with tackling the exam questions. It might be too late for the current Year 11 pupils, but worried Year 10 students or their parents might want to get hold of this now in preparation for the 1996 exams. As Thanh Quan says, a little time invested in study will return immeasurable rewards.



A few hours with GCSE Maths and even the most puzzling questions may seem easier

Haunted By You

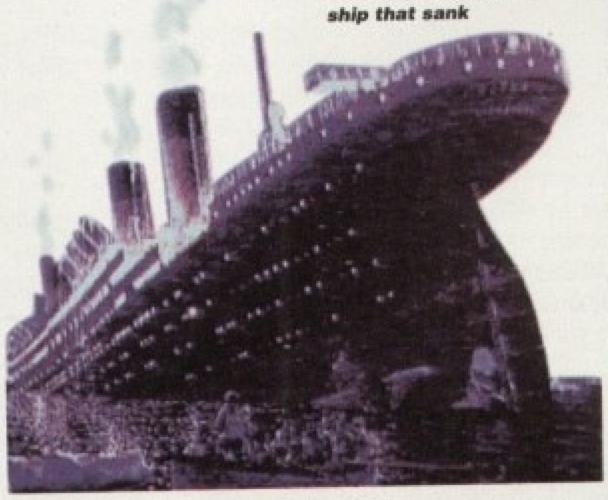
Over the last few months, a number of programs reviewed fairly recently have been updated. Since space is limited, rather than go through them all again in detail, I thought something of a round-up would be in order.

Firstly, Backdoor v6.66 is the very latest edition of the popular guide to game cheats, and covers absolutely zillions of the things. If you're stuck on level 15 of Alien Herrings From Venus and can't face life any more because of it, then ring OnLine PD now and get hold of your copy.

Next up, Titanic II. Author Paul Thompson has ironed out a few minor bugs and added several whole new sections to this informative look at the famous ship and its ill-fated maiden voyage. Along with a whole host of new text and pictures, there's also a 50-question multiple choice quiz. It's available from him for £4.99, or £2.49 for owners of the first version who send in their disk.

Finally, version 2.0 of disk catalogue program, TurboCat. Author David Hill sent a nice letter shortly after the previous version was reviewed, explaining that he's addressed every single criticism I made of the program. He's also added other handy features such as on-line AmigaGuide help. As a result, TurboCat and the accompanying TurboView record searching program are considerable improvements on the previous versions, and I can definitely recommend them. Roberta Smith DTP have a PD demo of the program, and registered Shareware version costs £5 from the author.

Yet more facts on the famously unsinkable ship that sank



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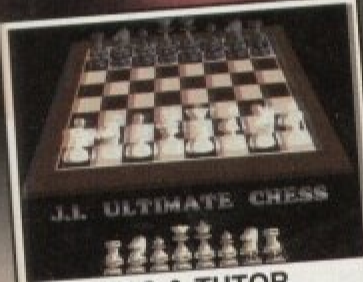
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(Please state OS version when ordering)

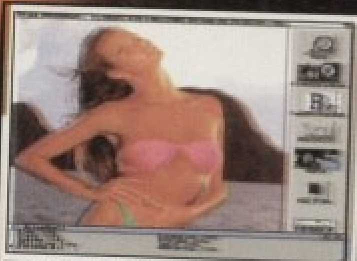
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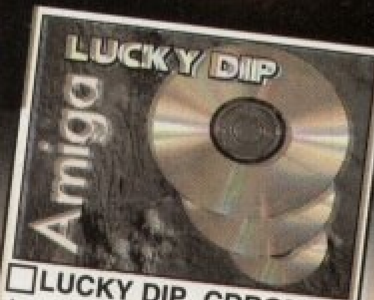
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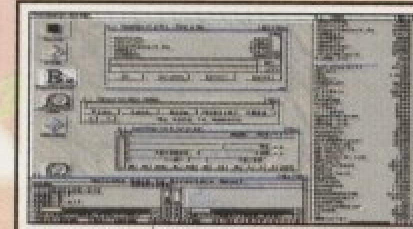
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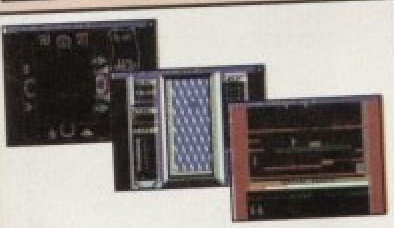
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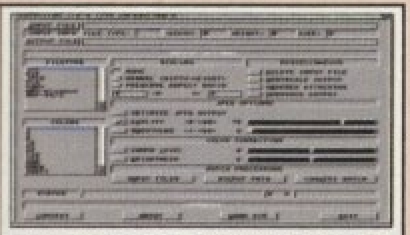
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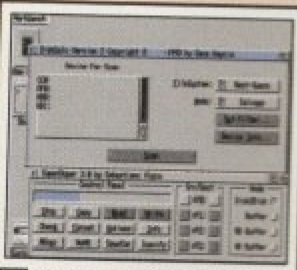
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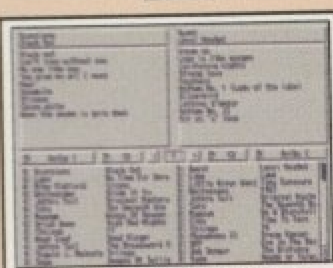
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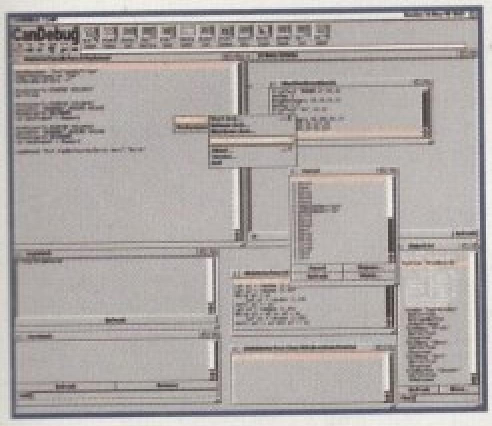
Bug killer

Ben Vost looks at an add-on for CanDo 3 that makes sure your code is up to scratch

As a follow up to our recent review of CanDo version 3, here's an add-on that will become essential to me as my expertise grows with CanDo. CanDebug is, as its name suggests, a debugging tool for your CanDo scripts. It requires version 3 of CanDo, or better, along with 500k of hard drive space for installation.

CanDebug's forté is to run through the scripts that go to make up a CanDo application, testing the integrity of each before proceeding onto the next. You can keep an eagle eye on the variables and arguments that your application uses, as well as checking on memory usage. Normally, you won't have a problem dealing with the more obvious bugs in your script, and see what is making them tick, draw, write and show.

One bad thing about CanDebug is Inovatronics' choice of colour scheme for the screen that CanDebug uses. For some reason, they decided that a sort of neon peach colour would be really settling for the eyes, especially when the file requester is used.



This cluttered interface hides the power that underlies CanDebug

As it stands, nothing could be further from the truth. It might have made sense to use the same screen palette as CanDo, or even just the four Workbench colours. After all, it's not as though CanDebug really gains from an eight colour palette – the extra four colours are solely being used to prettify (if you can call it that) the screen.

Other than this fairly minor complaint, CanDebug does what it says it will, just like the advert for wood varnish, so you won't be disappointed if you maintain large CanDo scripts that have evolved over a long period. It's a little overpowered for my current needs, but I'm sure that when I become a power CanDo programmer I will really be thankful for its many abilities.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

CanDo

The bottom line

Product: CanDebug v1
Company: Inovatronics GmbH, Lise-Meitner-Str. 1, 85716 Untershleissheim, Germany
Tel: 0049 89 3173164
Price: DM199 (roughly £75)

Ease of use	**8**
Implementation	**8**
Value for money	**6**
Overall	**7**

CanDebug's tools

One of CanDebug's informative icons is the small stack under the 'g' in CanDebug. This shows CanDebug's current status and can be in one of several states. Most importantly, this icon lets you know if CanDebug is single stepping a script or letting it run through. It will also let you know when CanDebug is attempting to stop a script (or it is waiting for the end of a particular script.

ArgWatch – shows the arguments in the current line of the script you are debugging. BreakPoints are places in your CanDo application that can be singled out for special attention. This icon brings up a list of all the break points defined for your script and lets you edit them, show them or remove them.

Buffer List – lets you check out information relating to the buffers loaded by your program. Buffers in CanDo can be anything from a sound to a text file.

CmdPerform – lets you try out changes to a program without actually having to change the script itself. This makes it easier to try a different setting for a variable to see if the new version works better, before committing yourself by changing the script.

Unfortunately, although this module has an edit menu with cut, copy and paste commands, they are implemented in an even worse fashion than CanDo's own text editor. CmdPerform is limited to cutting, copying and pasting the entire contents of the CmdPerform window only, and doesn't use the standard Amiga clipboard to do so either.

GrabDeck – is a sort of task watcher which looks for any CanDo applications running on your machine and if they are unbound (not compiled into a standalone application), then you can choose to debug the. Even if they are bound you can still use GrabDeck to shut down CanDo applications.

MemoryWatch – is a chart showing the memory used by your app. It has a cycle gadget to let you move between different scales from 64k to 16Mb and shows not only the amount of memory allocated as a whole to the program, but also the amount actually being used.

ObjectList – shows all the objects contained within your program. Objects may be defined as the buttons, text fields, cycle gadgets and so on that your deck actually uses. The objects shown in the list are further subdivided into ones that are currently 'attached' (in use) – shown in white – and those that aren't – shown in black.

ScriptCommon – is a special case. Because CanDebug's many windows can really clutter up a standard resolution screen, ScriptCommon lets you open just one script window into which every script is piped.

ScriptSkip – lets you define scripts in your application that can be automatically executed at top speed.

ScriptStack – shows the current script in an opened window topped by iconified windows of all the scripts, hence the name of the script.

SystemWatch – gives a general view of the application being debugged, with specific topics for information like Memory, Graphics, System, etc.

VarList – gives you a list of all the variables being used in the deck as they appear and lets you trace them through the scripts as they execute. It tells you the name of the variable as well as its type.

VarWatch – is the complement to VarList and lets you examine specific variables and add new ones to the list.

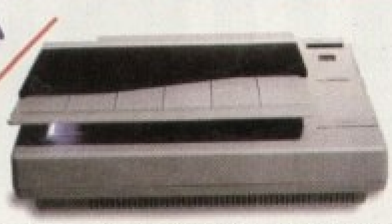
Most of these windows are actually separate program modules and as such have their own menus and settings, etc. Most importantly, with most of the modules you can set them to auto refresh, saving you the hassle of having to constantly hit the refresh button in all the windows on the screen.



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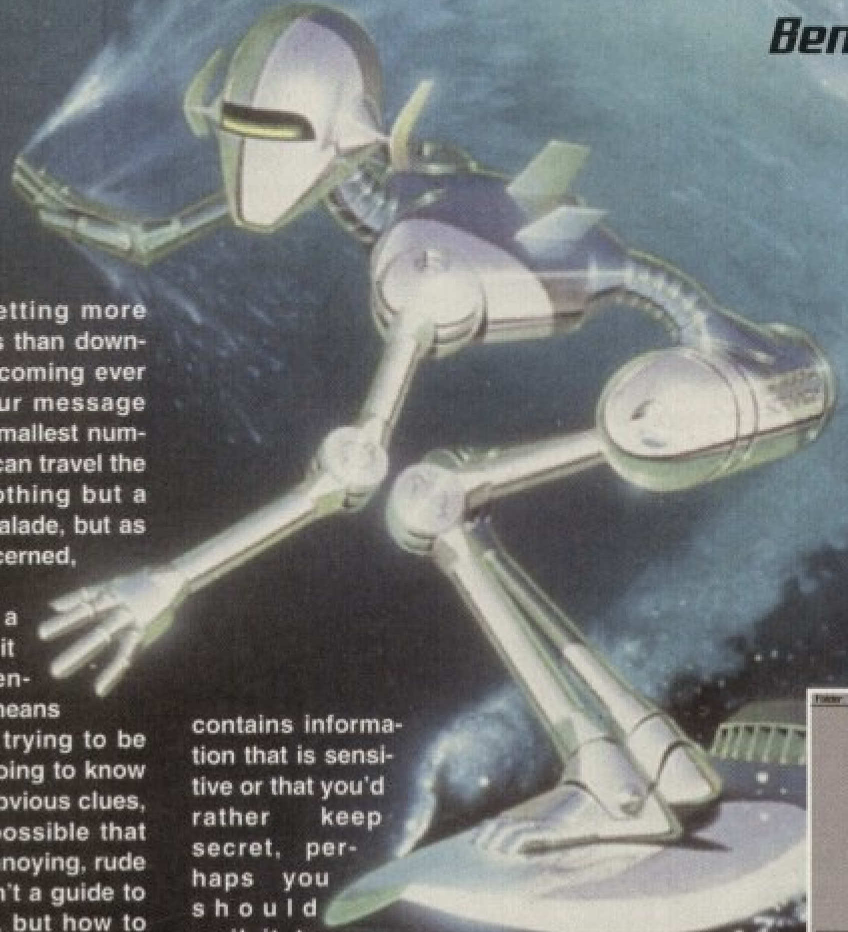
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The do's and don'ts of surfin'

Ben Vost gives some tips and hints for polite, trouble-free Internet usage

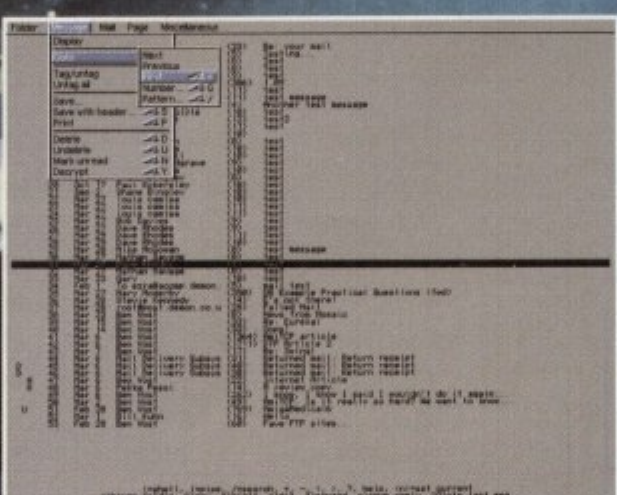


With the Internet getting more crowded these days than downtown Delhi, it is becoming ever more important to get your message across while annoying the smallest number of people possible. You can travel the superinfobahn wearing nothing but a pink tutu, flippers and marmalade, but as far as everyone else is concerned, this is what you look like: :-).

This anonymity can be a double-edged sword. While it grants us freedom from gender, age and colour, it also means that although we might be trying to be really funny, people aren't going to know unless we give them really obvious clues, all the time. And it's just possible that people might think we are annoying, rude or just plain mad. So this isn't a guide to your behaviour on the net, but how to deal with other people's.

Let's start with e-mail. This is probably the most private of the methods for getting your point across to other users. E-mail can be addressed to just one person, or to groups of people, but the same rules still apply. Be aware of where your mail is actually going to go. Obviously, it will be going to your friend or colleague, but where will they be reading it? If it contains information that is sensitive or that you'd rather keep secret, perhaps you should mail it to them at their home account, rather than at work or university.

If you are sending important information, trade secrets, or otherwise sensitive material, it is worth remembering that e-mail can be very easily faked or forged. Make sure that what you are getting is actually from the person you expected. Until e-mail is made more secure, the ➤



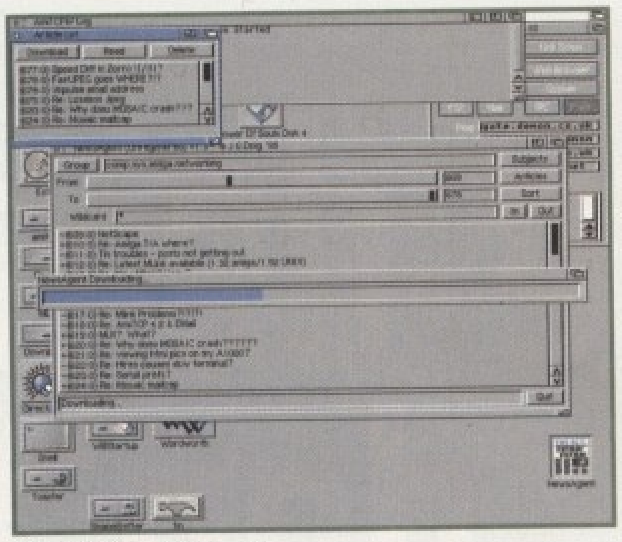
A postman's life may be a jolly one, but I prefer to deliver my mail by clicking on a button

easiest way of doing this is to give them a telephone call or send them an e-mail confirmation of their request before sending the information itself. In fact, it's never a good idea to send UUencoded binaries of enormous size without first checking that the recipient of your generosity is actually going to be happy staying online to download all this information.

The same thing applies with constant referencing. If you have taken part in an e-mail conversation where there are numerous levels of quoting, trim your reply a little. It's highly likely that the other party still has the previous correspondence, so they can always refer back to that if necessary. In general, you only really need to quote direct questions when giving replies, along with pertinent ancillary information. Leave all the earlier stuff out – basically anything you have read more than once.

NO PRIVACY

We'll go onto a related topic now, that of UseNet. Usenet can be treated just like e-mail, but on a worldwide basis. Many thousands of people could end up reading what you have written, so it is even more important that you pay attention to what you are saying. Flame wars can be started by the most trivial things such as poor spelling or what might seem to be perfectly innocent comments. It is vital that you trim quotes when you follow up a thread to prevent bandwidth from being wasted.

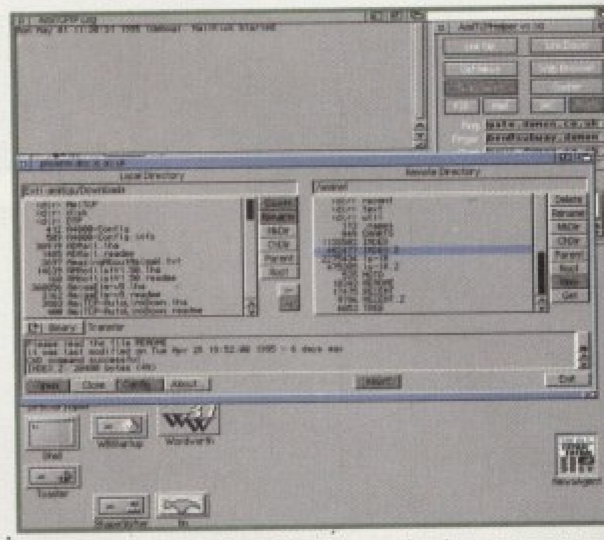


NewsAgent – A splendid new method of gathering your news articles selectively should help anyone who doesn't want "noise" articles

You also never know who might be reading the newsgroup you are posting to, so avoid the example set by Jake Baker who wrote a story in one of the alt.sex.* newsgroups and had the idiotic idea of using the name of one his fellow students for the victim of a fairly sick fantasy.

It resulted in Baker being arrested, and now there are deliberations to find out whether Baker's tale was merely harmless fantasising (he had never even spoken to the girl in question), or whether it was a prelude to an actual physical attack. This is unlikely to happen to most of us, but you could still end up alienating people with careless comments, so be polite.

It's not all doom and gloom, however. People tend to be very helpful on the Net, giving a plethora of answers to any sensible query. If you want to get an answer to a problem that's been troubling you, I can't think of a better resource, but make sure you have tried all possible solutions first, otherwise not only will you be wasting people's time, you will also be wasting that precious bandwidth. In particular, make sure you have read whatever documentation comes with the package, else you



Downloading the Aminet Index file can be done once a week and prevents those embarassing "Where is...?" questions

A word of warning

Do: Take your time and re-read your e-mails before sending them out.
Do: Ignore people who are just blowing off hot air and **don't** rise to their bait if they continue to taunt you.
Don't: Send large files without confirming with the recipient that it will be OK to do so.
Don't: Put information that must be kept absolutely secret in e-mail, unless you have some form of Public Key Encryption.
Do: Help to propagate the helpful attitude that exists on Usenet by offering your advice to people who need it.
Do: Read the manuals before asking questions.
Don't: Put your questions into more than two or three newsgroups at most. People get fed up with having to read the same item over and over again.
Do: Be aware that others are reading your news.
Do: Have a good time, but spend as little time as possible on-line so that you can still have a good time in three months when the two-volume BT bill gets delivered in a truck.

Smileys and TLAs

Smileys or emoticons are one way of ensuring that people know how you are feeling when you are typing your ASCII epistle. TLAs are Three Letter Abbreviations (that sometimes have more than three letters) and are a useful shorthand, especially if you are typing online.

:-	Basic smiley	BTW	By The Way
:?)	Big nose smiley	IMHO	In My Humble Opinion
;-)	Wink	IMNSHO	In My Not So Humble Opinion
:-(	Unhappy	L8R	Later
:-P	Raspberry blower	ROFL	Rolls On Floor Laughing
8-)	Speccy smiley	RTFM	Read The F*?@ing Manual
:-*	Kiss	TANSTAAFL	There Ain't No Such Thing As A Free Lunch
:o)	Clown		
:-/	Angry	TTYL	Talk To You Later

Mailing lists

One good way of getting information you want without any extraneous noise is to subscribe to a mailing list. Mailing lists work like a cross between newsgroups and e-mail. You receive e-mail from the list containing articles posted by other people on the list, and when you want to reply or post you address your mail to the mailing list rather than an individual. That way, every one that subscribes to the list will receive your e-mail.

The PageStream user's mailing list
PGS-request@ramiga.cts.com
ADD [your e-mail address]

ami-sci (Scientific/engineering software and related homebrew hardware)
Majordomo@CFHT.Hawaii.edu
subscribe ami-sci

Blitz Basic 2 Programming
blitz-list-request@helsinki.fi
"SUBSCRIBE username@domain"

AMOS
subscribe@xamiga.linet.org
"#amos username@domain;"

CDPub (CDROM publishing and systems) – All platforms
Mail-Server@knex.via.mind.org
"SUBSCRIBE CDPub FirstName LastName"

Commodore-Amiga
subscribe@xamiga.linet.org
"#commodore username@domain;"

could end up with a terse RTFM in response to your question.

One of the things that really annoys me, but other people seem to take it in their stride, is the net user who can't be bothered to download an Aminet index file. Granted, these files are big (around 400k for the compressed version), but having one enables you to find any piece of software on the Aminet, so it has to be worth the wait.

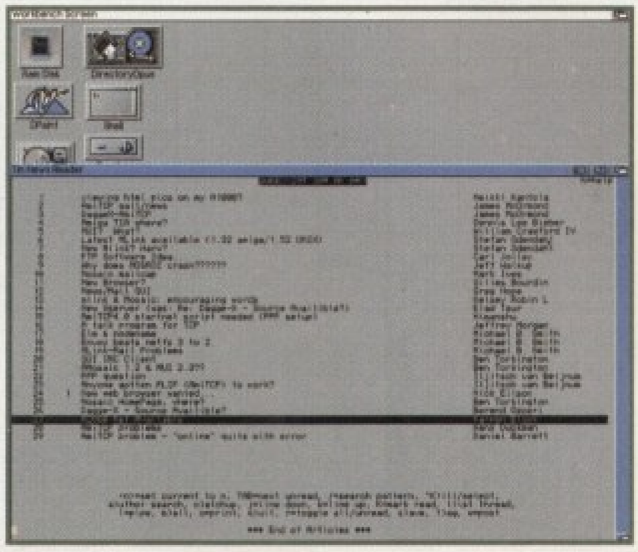
As a last resort you can stop downloading messages which conform to particular criteria, such as author name or subject. This is done using a kill file, and users of AmiTCP will find they won't even download the offending articles. However, people who are sticking to AmigaNOS will only avoid having to read them – AmigaNOS not being sensible enough to not download them in the first place.

The web doesn't tend to pose too many problems as it is pretty much a passive communication medium, unlike news and mail, but as a general bit of advice, if you are going to be reading the same page for more than about five minutes, you might want to set a ping window going at the same time which will ensure your connection doesn't get timed out for lack of traffic.

In conclusion, as users of the Internet we must remember that we are the first of the many, rather than the few. Whether it stays as it is, which is extremely unlikely, or changes beyond recognition, there will still be a need to keep going what has been started – an ultimate democracy that currently exists, with no barriers for nations, colour, creed, sex or age. And as such, we have a burden to bear. We can make it a replica of today's society in the Western world, with greed and paranoia being our chief motivators, or we can continue to create the nearest thing to a utopia. It's up to us.



IRC or Internet Relay Chat using Grapevine. Here you have an on-line forum for the discussion of anything



The heart of flaming territory. Newsgroups can be a source of superb information, or great irritation

CSAA (comp.sys.amiga.announce)
(Product or other)
announce-request@cs.ucdavis.edu

Emplant List
subscribe@xamiga.linet.org
"#emplant username@domain;"

Excelsior! BBS System
subscribe@xamiga.linet.org
"#excelsior username@domain;"

Hyperami – AmigaVision, CanDo, DeluxeVideo, Director, etc.
listserv@archive.oit.unc.edu
"subscribe hyperami"

Imagine – the 3D Rendering package
imagine-request@email.sp.paramax.com
"subscribe" in subject line

Lightwave – Video Toaster and related hardware
1. subscribe@xamiga.linet.org
"#lightwave username@domain;"

2. lightwave-request@bobsbox.rent.com
body: "subscribe lightwave-l
your_id@your_address (your_name)"

lwplugin-l (for lightwave plugin software development info)
listserv@netcom.com
subscribe lwplugin-l

Video Toaster
toaster_request@bobsbox.rent.com
body: "subscribe toaster-l
your_id@your_address (your_name)"

ParNET – AmigaAmiga networking system
parnet-list-request@ben.com
questions to: parnet-list-owner@ben.com

SupraFAX
subscribe@xamiga.linet.org
"#supra username@domain;"

Amiga Misc (bit.listserv.i-amiga)
i-amiga@rutvm1.rutgers.edu

Comp.Sys.Amiga.Hardware
ami-hard%mainecs@cunyvm.cuny.edu

Comp.Sys.Amiga.Tech
ami-tech%mainecs@cunyvm.cuny.edu

EGS Mailing List (The 3rd party RTG system for 24-bit graphic boards)
listserv@darkside.osrhe.edu
body: "SUBSCRIBE EGS "

Piccolo (The 24-bit Graphics Board)
pks-list-request@ben.com

Linux (680x0 channel)
linux-activists@niksula.hut.fi

Amiga SLIP List
amiga-slip-requests@ccs.carleton.ca

Amiga Mosaic
subscribe to: witbrock@cs.cmu.edu

Amiga Mach List
mailserver@lists.funet.fi
"sub amiga-mach firstname lastname"

Amiga X11 Info
mailserver@lists.funet.fi
"sub amiga-x11 firstname lastname"

Amiga GNU C info
mailserver@lists.funet.fi
"sub amiga-gcc-info firstname lastname"

Amiga GNU C Compiler Internals
mailserver@lists.funet.fi
"sub amiga-gcc-port firstname lastname"

Amiga Reviews Request Info
amiga-reviews-requests@math.uh.edu

Aminet Uploads
listserv@wunet.wustl.edu
"SUBSCRIBE aminet-weekly" OR
"SUBSCRIBE aminet-daily"

Amiga Oberon & Modula-2
amiga-m2-request@virginia.edu

NetBSD Port
netbsd-admin@cbmuucp.commodore.com

listserv@gu.uwa.edu.au
"subscribe real3d firstname lastname"

AmiTCP
queries to: amitcp-group@hut.fi

Picasso II Gfx Board
Picasso-Request@Terrapin-Station.umd.edu
"subscribe picasso"

Amiga LISP
amigalisp-request@contessa.phone.net

UMS (Universal Message System)
request@umshq.dfv.rwth-aachen.de

PGP Encryption for Amiga
listserv@peti.gun.de
body: "ADD [your_email_address] PGPAmiga" or "HELP"

Always remember that when you receive mail from a mailserver, you can't reply to that mail to unsubscribe from the list.

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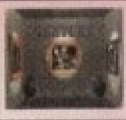
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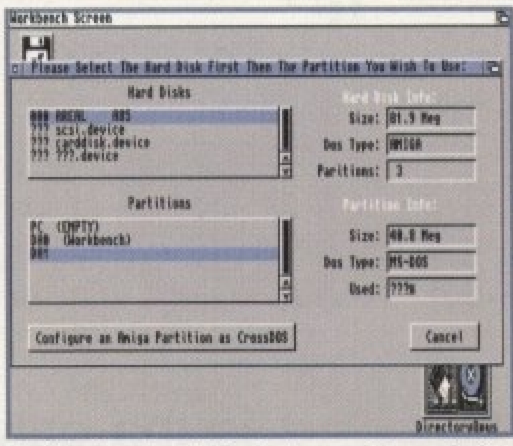
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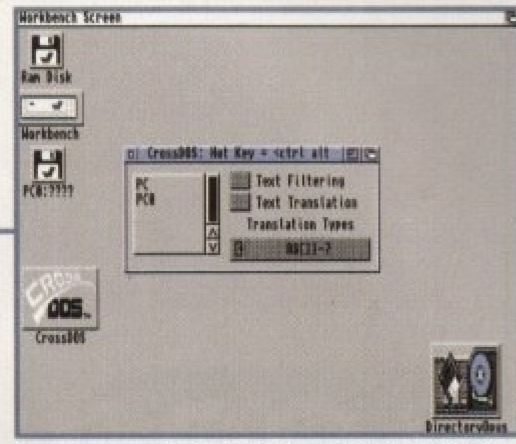
The ability to transfer files between an Amiga and different computers has become more and more useful these days. No doubt many of you have seen that obscure CrossDOS device driver lurking in the Storage drawer. No doubt many of you have never had the need to activate it.

For those who are in the latter category, this rather neat driver, once placed in the Devs drawer (or merely double-clicked), allows your Amiga to read, write and format standard MS-DOS floppy disks. This is obviously great news for Amiga owners who have access to, or work with PCs as they can now transfer their work to their Amiga.

I use this transfer feature a lot for the animation and graphics work I do between the two machines. Unfortunately, the CrossDOS driver supplied with Workbench is only set up to work with floppy disks and even with 1.4Mb floppy drives, many users will no doubt have to use multiple disks and archiving utilities for large amounts of data.



Configuring a hard drive to share with your Amiga and PC is as easy as pointing and clicking your mouse thanks to this utility



The Amiga and PC handle text files in radically different ways. This utility automatically converts between the two types when copying

Between you and me

Transfer files between the Amiga and PC with ease, courtesy of CrossDOS Professional. Darren Evans puts it to the test

For instance, animation and graphics files tend to lean towards the extremely large side. Imagine trying to transfer a 15 second animation consisting of 450 individual 24-bit Targa files to a PC for a spot of editing with Premier 4 or Photoshop 3. Now that's a lot of megabytes to transfer via floppy disk, and it usually ends up being a long and tedious archiving session.

If only there was some way to tell the Amiga to use an MS-DOS formatted hard drive as easily as it uses the floppy disks. You could then transfer lots of files, with no need to archive or swap disks whatsoever.

Now, thanks to CrossDOS Professional and those jolly nice people at HiSoft, this process is a breeze. The developers of CrossDOS Professional – Consultron – are, unsurprisingly, the same people who are responsible for the Workbench version. However, the CrossDOS Pro version offers much faster disk writes and reads, as well as a host of support utilities.

Once installed, CrossDOS Pro works as transparently with hard drives as Workbench's CrossDOS does with floppy drives. This transparent operation is due to the fact that CrossDOS is basically the MS-DOS file system which is seamlessly integrated into AmigaDOS.

The actual installation procedure is remarkably simple, with no lengthy setup procedures in sight. Running the install program brings up the standard Commodore install utility with the options of installing CrossDOS, which copies all the relevant library and device drivers to the appropriate drawers, Configure Hard Disk, which will automatically run the hard disk configure utility if you happen to have a suitable hard drive already connected and, surprisingly and infinitely welcome, an Uninstall option. All Amiga software developers take note. Once finished, PC floppy disks, and any MS-DOS formatted hard drives that are connected, will be automatically available on Workbench.

What's in a name?

The only drawback to PC file transfers via CrossDOS is that you must keep a check on filename lengths. PC filename convention limits names to a maximum of eight characters with a three character file type extension.

The Amiga can handle longer filenames and these will be brutally chopped to the eight character limit, causing all manner of potential problems without so much of a by your leave. I must stress that this is an MS-DOS problem and not a fault of CrossDOS.

OPTIONS

The hard disk configuration option in the install menu starts up the hard disk configure utility which is also accessible as a standalone program on the CrossDOS installation disk. The utility has three different methods for creating an MS-DOS hard drive. You have the option of creating a 'real' drive or choosing between two simulated drives.

A real drive is simply one that is entirely formatted as an MS-DOS drive, either by a PC or by CrossDOS itself. A simulated drive can be a partition on an existing Amiga drive which can thus have a partition that is assigned the CrossDOS file system, with other partitions being standard AmigaDOS file systems.

The other simulated drive-type consists of the image of the drive stored as a file. This type is useful if you only plan to share it as a boot partition for products such as CrossPC, PC-Task, Bridgeboard, AtOnce or GoldenGate PC emulators. Such a flexible feature should mean that most users seeking PC compatibility will find the most appropriate setup for their needs.

The actual configuration process amounts to simple clicks of the mouse. All you do is select the respective button for the drive type, then choose the drive device which is to be configured, and then choose which partitions, if more than one, to process. Clicking on the configure button then instantly turns your device into an MS-DOS format drive, creating the mount file automatically and placing it in the Devs drawer. If only life were so simple?

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended



Workbench 2 or higher — Hard drive

The bottom line

Product: CrossDOS Professional
Price: £49.95
Supplier: HiSoft
Tel: 01525 718181

Ease of use	8
Implementation	9
Value for money	8
Overall	9

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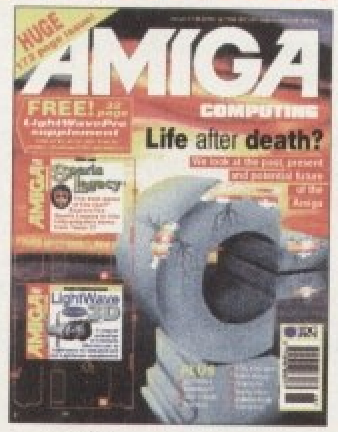


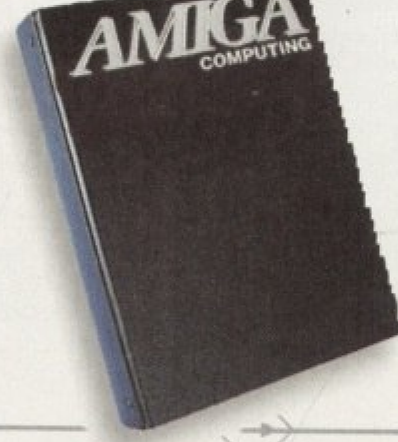
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A singular

As the industry behind interactive entertainment matures, game design is undertaken increasingly by professional development teams. But, as Gareth Lofthouse discovered, the individual enthusiast can still make a mark

Making a game in 1995 is a tough business. Back in the '80s the classic game releases were conceived by teenagers and brought to life on the cheapest, most popular home computers of the day. But the time when game design was the preserve of the spotty bedroom programmer is gone forever; in the '90s the suits have moved in on game development and a vast money-spinning industry has been well and truly established.

As the technical standards of game design have increased to the point where the latest releases boast film-like production values, it's not surprising that the amateur has been pushed aside and replaced by professional development teams. Interactive multimedia, fast-paced texture-mapped graphics and cinematic sequences are the order of the day, and such hi-tech projects can require teams of artists, programmers and sound specialists working on costly workstations. Small wonder if the average Amiga enthusiast feels outclassed and shut out.

MAKING A HIT

Yet against all odds, there are amateurs who dream of making a name for themselves with a hit game. In bedsits dotted around the nation, there are still people who will spend every moment of their spare time plugging away on that most affordable home computer, the good old Amiga.

It would be natural to assume their efforts are doomed to failure, or that at best these naive enthusiasts will get some brief fame on the PD circuit. Is it possible, then, that potentially the biggest game of the year could have been made by one single man?

The tactical multiplayer game, Worms, is due to be released by Team 17 in September. Originating from PD titles like Scorched Tanks, it has simple two dimensional graphics that set it a million miles away from the latest multimedia extravaganzas – and it looks set to take the game playing world by storm.

Though Team 17 are publishing the game, it's entirely the work of 22-year old Andy Davidson. Developed over a period of four years, the story of its success is proof that the bedroom coder can still take on the professionals at their own game. Davidson is a typically self-taught computer enthusiast who started programming games purely for his own pleasure in the hay day of the ZX Spectrum. It wasn't until he'd bought an Amiga and started coding Worms that he even considered trying to sell one of his games commercially.

During its development he was running a shop in Bournemouth selling Amigas, a job which proved helpful when it came to playtesting and gaining suggestions from customers regarding the game. However, he only really raised his ambitions for Worms when he heard that Amiga Format were running a competition for readers' games.

Amazingly, though Davidson got an impressive version of the game ready for the competition deadline, Format overlooked this gem – in fact, Davidson heard nothing more about the competition and had to find out for himself that Worms had been rejected. Team 17 obviously thought this was an error of judgement, so it'll be interesting to see how Format rate the game when it appears commercially.

Fortunately, this setback didn't mark the end of Worms, though it was quite a close call. 'I was getting a bit fed up,' Davidson told us, 'so the ECTS in September (1994) was going to be my last attempt to get it published.' His first choice was Team 17 who, to his surprise, immediately realised they had a classic in the making; after turning up at their stand and showing them Worms for just five minutes, Team 17's Creative Director, Martyn Brown, asked him if he'd like them to publish it.

The astounding way in which Worms has snowballed from its humble beginnings is hard to believe, particularly for Davidson himself. Asked if Worms is going to make him rich he said: 'It's very difficult to comprehend. When I went to Team 17 I was just thinking of selling Worms as an Amiga budget game.' Instead, Worms is going to be released as a full-priced game across an incredible 16 platforms, and Davidson stands to gain royalties from sales of each of the game's versions.

Even more encouraging for the individual enthusiast is that Davidson believes amateur programmers can compete against the visually glossy productions produced by major companies, providing they concentrate on gameplay. Criticising multimedia and games featuring rendered animations, he said, 'I haven't seen one of those type of games that



Worms – Team 17's big hope for 1995, and the game Amiga Format passed over



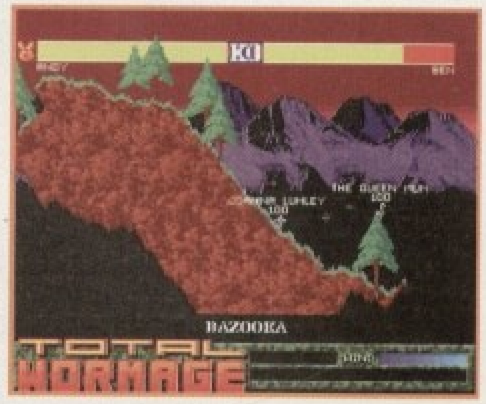
Limbo of the Lost Souls was created entirely by three self-taught enthusiasts

Protecting your ideas

Ensuring that the copyright on a game is kept safely in the designers' hands is an issue that naturally raises concern with game makers. The fear that unscrupulous publishers will steal a good idea and claim it for their own is enough to make any programmer nervous.

Fortunately, protecting yourself legally is a simple procedure according to the game makers we spoke to. Tri-Logic, for example, were advised by their solicitor that posting a copy of the game to themselves is a perfectly good way of registering copyright. Thankfully, this method has the added advantage of being virtually free.

r success



Visually simple, Worms' strength lies in gameplay that will leave many more glamorous releases standing



Andy Davidson will earn royalties from the sale of his game across 16 platforms

> Amateur programmers can compete against the visually glossy productions produced by major companies, providing they concentrate on gameplay

I want to play. The game itself is the essential thing. I've been playing Worms for nearly one and a half years and I still enjoy it. '

'If Worms relied on just rendered graphics it would never have the depth it has now. No two Worms games will ever be the same, but with rendered games you'll never get that much variety.'

The story behind Worms is an example of the importance of believing in your own ideas. Asked about advice for people working on their own game projects, Davidson said: 'You can't imagine how people will respond seeing a game for the first time. But if *you* believe in it you can find someone else who believes in it.'

Worms, however, isn't the only potential hit to have been brought to Team 17 by an outside individual. Throughout the company's history people have turned up on their doorstep with ideas, and in some cases Team 17 have been only too happy to pay them a salary and help them turn a game concept into a commercial reality.

Of course, many of the best ideas would never see the light of day without the helping hand of luck, and this is as true of game design as anything else. Team 17's latest project developed by a single enthusiast is Alien Breed 3D, a high profile release that only came into being because of a chance meeting on the Internet. Andy Clitheroe is a student at York University who had written a game engine for the Amiga in his spare time. Originally, it consisted of a 3D maze run-around – it was fast and slick, but a million miles away from being a game, let alone the first class Doom clone that Breed 3D promises to be.

Fortunately for Clitheroe, he happened to meet Martyn Brown on the 'net. Having mentioned the game engine, he was invited to show his work to Team 17, and when they'd been suitably impressed they offered him a deal and encouraged him to bring Breed 3D to fruition. Clithero is currently working on the finishing touches in between revising for end of year exams.

Those who are hoping to sell a game concept, however, would be fools to rely on this type of good fortune. Optimising a game's chance of being published in most cases boils down to a lot of hard work, persistence, and enough self-confidence to accept the odd knock-back.

Tri-logic's Limbo of the Lost Souls, previewed in this month's System, is possibly the best example of how to sell a game to a publisher. The brainchild of three adventure enthusiasts, Limbo may have started as an idea cooked up over a few pub drinking sessions, but they quickly realised that encouraging interest from publishers would require a more professional approach.

Limbo's programmer, Steve Bovis, told us how they knew they had a good product to sell, but they had to find novel marketing ploys to get it noticed. Consequently, they set about making a video using an A500+, Deluxe Video and a genlock, and despite its relative cheapness it seems to have paid off. Previously, Tri-logic had met with rejection, but Limbo's publishers, Rasputin, were so impressed by the new video they decided to give the game their full backing.

There can be no doubting the trio's commitment to seeing Limbo through. Over the six years of development, each member of the team has held down a day job and earned money which often got invested back into the project. Having been through the experience, Bovis pointed to this single-mindedness as the key to success for the game designer, and warned: 'Lose enthusiasm in the project and it's as good as finished.'

If only one lesson can be gathered from these varied experiences, it's that the industry needs a powerful but inexpensive machine like the Amiga to allow talent to come to the fore. Andy Davidson was particularly impassioned on this point: 'Worms could only have started on the Amiga – that's the only way you can turn an idea into a game. If the Amiga dies a hell of a lot of games are never going to come out which otherwise would.' Clearly a lot depends on the survival of our machine.



L J Laurence, T J Croucher and S Bovis, three adventure enthusiasts who set up Tri-Logic

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Bingo game (Need 1 Meg chip)
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Fruit machine sim (Need 1Meg chip)
F1 40 HENRY HOUSE (£4.99)
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900 high quality scanned/IFF pics
F1 44 BLACKBOARD V3 (£5.99)
Image processor. Needs 2 drives
F1 48 ERIK (£3.99)
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Text book about Kick V2 or above
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Special edition for all Amos users
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1-4 Player Horse Racing Game
F1 60 ULTIMATE QUIZ (£3.99)
Well presented Trivia Quiz
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Excellent "Alien Syndrome" game
F1 66 G.R.A.C. # (£4.99)
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A must for all guitarists – teach chords

MIDICRAFT MAGAZINE
Following on from where the highly successful AM/FM left off, this new disk based mag from the Craft Brothers is a must for all Amiga musicians
£2.50 per issue
(Issue 4 now available)

NEW – OctaMED V6 – £35.00* – NEW
New font-sensitive GUI layout. Loads & saves Standard MIDI files. Supports RAW, IFF, AIFF, WAVE, MAUD samples (mono & stereo). Save mods as executable files. Supports Aura sampler and Toccata sound board.
(Requires Kickstart 2 or greater)
*Registered V5 users – call for upgrade details

T.I.10 - £2.50
Latest issue of the MED Users Group Disk magazine. Essential reading for all OctaMED users
(Iss 6 to q10 also available)

MORTON STRIKES BACK AGA – £7.00
Brilliant A1200 only version of this classic style platform game with 80+ colourful levels
NON AGA VERSION – £5.00

AURAL ILLUSION V2 – £20.00
8/16 BIT SAMPLE PROCESSOR
32 bit processing – Powerful editing functions
30 Effects including Time Stretch, Graphic Eq. Mixer & Resonant Filter
55 Manipulations including Tuning, Filters & Modulations etc.
Compatible with most popular 8/16 bit file formats including IFF, AIFF, WAV, VOC etc. – Improved Synthesised Sound Editor
(Note – needs Kickstart 2 or greater & 2 Meg of RAM)

A DROP IN THE OCEAN – £10.99
This audio CD shows what can be achieved with a modest studio set up and an Amiga.
12 original compositions from the Craft Brothers

NOTHING BUT AMOS
Issue 7 of the best selling AMOS disk magazine
£2.50
(£4.50 with support disk)
Issues 1 to 6 also available

KIDS ONLY – £10.00
Originally due for commercial release this brilliant collection of educational activities is now only available from Seasoft
COLOURING PAD, DOT 2 DOT, PICTURE SLIDE, PAIRS, MUSIC MAKER, WORD SEARCH AND I-SPY
Each colourful activity has various skill levels making this title ideal for kids of all ages.

ETHEREAL - £2.50
Amiga floppy disk version of Dave Sullivans track for the "Amiga Experiment" CD. Although the CD may not now be published you can hear Daves work on this huge OctMED module

OG 2 – £3.95
A1200 AGA Version of this highly successful commercial quality platform game
OG 1 – £3.95
Non AGA version

MIDI MODULES
High quality Music-X and Amiga/PC MIDI files (state format required) produced and arranged by Kevan & Gareth Craft
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F1 56 GIDDY 2 – £3.99
Sequel to the Best Public Domain Game "Giddy"
Commercial quality platform game

Vlab Motion

It's a strange thing, but it appears the vast majority of Amiga journalists seem oblivious to the importance of the VLab Motion system. Such is the importance of this product, and the revisions to the MovieShop software, that another look is essential.

In short, the VLM system provides the only affordable means of producing broadcast quality AV – alias audio video – in a truly digital off-line environment. I think what has caused the animosity on the part of the journalistic fraternity is the rather optimistic and, dare I say, <None>unrealistic claims for the product on its initial launch.

In the early days, the accompanying manual combined unrealistic claims for hardware compatibility with a painful lack of essential information. This would be bad enough on fairly simple products, but that's one thing VLM certainly isn't. Although very easy to operate when configured, initial set-up can be a complex procedure demanding the assistance of a quality manual.

Fortunately, MacroSystem's have finally taken care of this key shortfall and replaced the original skimpy manual with a 200-page offering that delivers all the information you're ever likely to need in a friendly and comprehensible manner.

In reality VLM, like all DV systems, requires a relatively hefty machine, with the most important element being a fast hard SCSI II drive. Unfortunately, it's true that VLM can't match the image quality of the PAR – alias Personal Animation Recorder – on a less than perfect system – namely an 040 CPU running a SCSI II drive. However, even with the image quality compromise on lesser machines, the benefits far out-weighed the limitations via a combination of flexibility, functionality and cost effectiveness.

For example, I regularly run the system on an 040-based A3000 running a standard SCSI. As a result I can only reliably attain 65 per cent compression – which equates to image quality roughly similar to a quality composite/VHS signal.

In order to obtain BetaCam SP quality, I would require somewhere between 85 and 90 per cent – which simply isn't possible in video resolution on a standard SCSI device. Even though my VLM set-up can't compete with a PAR on the same machine when it comes to pure image quality, I wouldn't swap, simply due to the massive range of additional features the MovieShop software can provide. The most important bonus is VLM's ability to operate as a true off-line editor. Unlike the PAR, actually moving edits around the video sequence is both easy, fast and, better still, instantaneous.



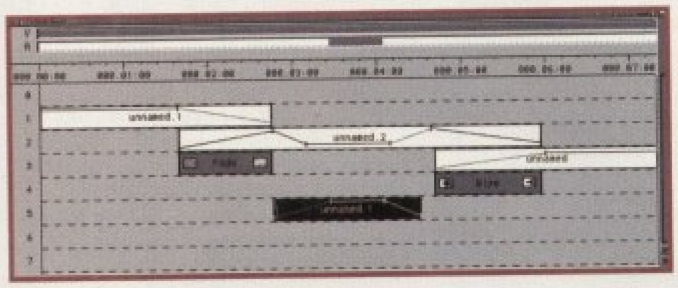
The ever-growing collection of VLM digital video effects. But be warned – without a fast CPU, DVEs can take a long time to generate



Silky-smooth crossfades are one of the key elements in VLM's roll in A/B roll emulation



ADPro-style automated DVEs are all part of the VLM package



A simple example of A/B roll, DVEs and imported audio. Scene one fades to scene two, which in turn is wiped by scene three. Meanwhile, the audio ramps and crossfades to match the video transitions and also drops down during the vocal overdub. Drag and drop editing at its best

CUELIST

Rather than physically moving the data around the drive, VLM simply makes a cuelist from the existing data and skips around – assisted by a RAM buffer – reading the specific data as required. As a result, making changes to the running order of scenes, or entire movies, is instant, whereas the same edits on a PAR could literally take hours as the system physically rearranges the data to reflect the new running order.

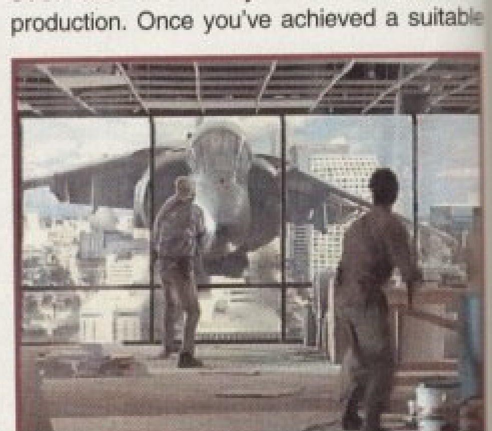
Another unique and truly superb feature of VLM is its seamless combination of audio and video. Since version 2.0 of the MovieShop software, VLM has had the ability to act as a true digital AV – audio/video editing system. Unlike any other Amiga system, audio and video are actually hard-wired together. As a result when you cut, copy and paste video, the same edits apply to the accompanying stereo or mono 16-bit audio. When the need arises you're still free to import and export the accompanying audio tracks, and mix them within MovieShop to generate a perfect backing track.

Although both VLM and the Toccata sound card combine forces within the MovieShop environment, samples captured directly via the Toccata's Samplitude software – such as backing music or narration – can still be imported and mixed with the existing AV in the production.

Better still, any imported or directly captured audio can still be worked upon within MovieShop. For example, you can import as much audio as you like, adjust its length, and position it on the Timeline wherever you want.

However, perhaps most important, you also have complete control over the envelope of the samples you're working on. As part of the Timeline control, you're provided with an envelope requester which allows you to insert multiple edit points.

Consequently, you can adjust the sound level for each sample as often as is necessary, or even create cross-fades between different audio tracks. In short, complete control over the sound dynamics within the production. Once you've achieved a suitable



Stunning image quality cover from a composite source

Component plug-in

A shortfall often levelled at VLM, especially in relation to the PAR system, is the lack of component import and export. However, this compromise has now been put to the sword with the launch of the long-awaited YUV module.

Thanks to this latest addition, you can now compete in the broadcast market via a direct link to BetaCam SP equipment and other broadcast quality hardware.



The soft side of the all-new YUV component module. Add a BetaCam SP recorder/player and you're in the big league

revisited



Paul Austin returns to the most important development in Amiga digital video ever

mix between the original audio, backing music, vocal over-dubs, sound effects or whatever else, the whole thing can be boiled down into a new super sample which can be linked to a particular section of video or kept as a separate element.

The finishing touch on the audio side is the arrival of a built-in SMPTE timecode generator. Now, striping a tape with timecode is simply a matter of plugging in the target recorder and clicking on a button – yet another broadcast essential catered for.

When the realtime grabbing and importing is complete, and the assorted clips have been trimmed, edited, and appended, the next step is to drop them into the Timeline and add the all important special effects and additional audio. At this stage you should have the various video clips spliced into complete scenes ready for the assorted cross fades and special effects.

LAYERING

The actual process of building the Movie is entirely non-destructive. In reality, it simply offers a means of layering and combining existing audio and video. The end result is user-defined sequencing of all the existing scenes – aided by visual and audio effects. If a new clip overlaps an existing element, a fade operator could be dropped between the overlap to produce a digital cross-fade.

This ability to mix and process multiple sequences points to another unique feature of VLM, namely its ability to operate as a digital A/B roll environment with a built-in digital effects processor.

Admittedly, this is by no means a real-time process, as once the scenes are arranged and the operators are in position, MovieShop sets about processing the video sequence, transitions and effects specified within the Timeline. Obviously this is all done automatically, but it nevertheless takes time as the process is done entirely via software – in a similar way in which ADPro and ImageFX apply effects to single images. Needless to say, the faster your CPU the better.

As you've probably guessed, audio is also computed in a similar manner. So if, for example, you've added a backing track or adjusted the envelope within an existing AV soundtrack, a separate computing pass is needed to apply the changes. Fortunately, this is much faster than applying video specific operators.

It must be stressed that non of the timeline operations are destructive. The software simply takes existing data, applies your edit decisions and effects, and then generates the results as a standalone AV sequence.

Although the process may sound daunting, after a little practise it becomes second nature. Fortunately, beginners are catered for via an easy mode in addition to the more complex RPN approach – which can process an almost unlimited number of sequences alongside multiple layered special effects. AC

Audio add-on

Firstly, the addition of CD quality 16-bit stereo audio is a matter of a £300 investment via a Toccata card, as opposed to £1000 for a stereo SunRize AD516 on the PAR system.

However, regardless of cost, the pure functionality of the VLM and Toccata combo makes it a far better investment. Unlike AV on the VLM, the PAR does not actually link the audio and video elements in a captured sequence.

As a result, if any edits are made on the PAR to either the video or audio track, the lip sync between the two will be lost unless you repeat exactly the same cut, paste and copy operations within the AD516's own control software.

In short, the sampler and video digitiser are completely separate entities. To keep things in sync requires a lot of manual effort, and of course there's no A/B roll emulation, DVEs, built-in chroma keying or automated audio processing.

In a nutshell...

Due to the pure scale of the VLM environment, the above has merely concentrated on the new and improved. However, that only scratches the surface of this incredible combination of hardware and software.

Given a suitable machine, the VLM and Toccata combination provides a complete digital AV solution which combines all the essentials of a true off-line editor, single frame recorder and DVE generator within a truly broadcast quality environment.

If all of the above doesn't make up for the scepticism and confusion surrounding the product's initial launch, I can't imagine what will. I only hope this update helps the VLM system receive the credit and sales it so richly deserves.

The bottom line

Product: *VLab Motion*
Supplier: *The Amiga Centre Scotland*
Price: *VLab Motion = £885 plus VAT*
Toccata *= £245 plus VAT*
YUV module *= TBA*
Phone: *01896 870583*



The good, the bad and the ugly

Gareth Lofthouse and Adam Phillips bring you our regular review of the latest tide of CD releases. This month there's the usual mixed bag plus a special focus on Amiga educational CDs

"More! More! More!" cry the CD-ROM owners, hungrily awaiting the next gleaming gigabyte disc of useful utils, thrifty tools or dynamic demos. At least that's what the distributors seem to believe, as once again another host of releases comes up for *Amiga Computing*'s scrutiny.

One of the main advantages of CD is it allows for multimedia applications with memory-greedy graphical and audio sections. Unfortunately, despite the growth of the CD market for the Amiga there's been a dearth of this type of product that has yet to be corrected.

Nevertheless, in addition to the usual mixture of sights, sounds and utilities, we've focused on the few multimedia titles that are available. Let's hope it will encourage developers to come up with some more multimedia software for the growing hoards of CD-ROM enthusiasts in the near future.

Weird Science Animations

As is becoming the fashion in this quantity-obsessed field, Weird Science's animation collection comes on two discs. The proclaimed purpose of the compilation is to show owners how the experts make use of the best animation tools available – in other words it's primarily just for enjoyment.

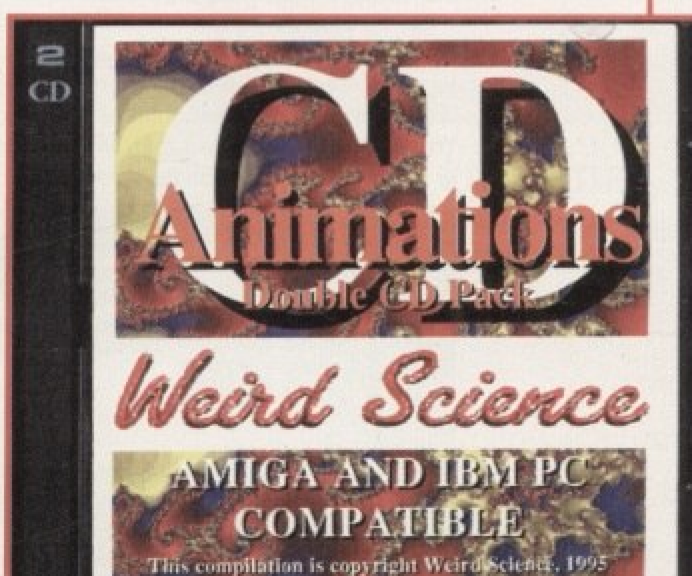
A viewer has been provided, so it's possible to view all the anims directly from disk providing the user has enough RAM. However, some of the files need up to 10Mb of memory, so you're not going to be able to view everything on the basic Amiga or CD32.

The first disc is reasonably well organised into a number of separate drawers, with space set aside for animation works by the reputed Tobias Richter and Eric Schwartz. Unfortunately, many of the Richter animations date back to the '80s and are less than impressive when compared with the sort of material that can be created on packages such as LightWave these days.

The Schwartz animations are comparatively successful, with a good range of his Aerotoon series to look at. Again, however, this is old stuff and parts of it have appeared elsewhere. A lot of the larger animations were created in Moviesetter, a powerful but old program that leads to problems in itself. New machines like A1200s and 4000s have trouble making these cartoons work successfully.

Other familiar files are the animations of VistaPro-created landscapes – the ones which send the camera swooping down into canyons and skimming over mountains. These were spooling directly from CD, and though they were jerky with a dual-speed drive, they should run more smoothly when used with a triple or quad speed. The second CD is less well organised than the first, being a general and alphabetic directory of animation files. Ploughing through this lot feels more like a hit and miss affair than is usual with CD libraries.

Basically, this package is about fun and there is some enjoyable material to be found for the patient searcher. However, the majority of the anims are rather disappointing or outdated, a fact which would put it fairly low on my CD shopping list.



The bottom line

Product: Weird Science Animations
Price: £19.95
Supplier: Weird Science
Tel: 0116 2340682

Ease of use	9
Implementation	6
Value for money	7
Overall	7

Grolier CD Encyclopaedia



This is another disc that has been available for some time, and one which, once again, should work with the standard Amiga range. We had no problems running it on our A4000, though using it with the Squirrel requires users to run it off Workbench.

The CD contains the complete text from the 21-volume Grolier Encyclopaedia combined with over 2000 photographs and illustrations to bring the information alive. In addition to the colourful visual content, many of the program's entries are accompanied by sound samples such as excerpts from famous speeches and musical compositions, or animal sounds such as various bird calls.

SIMILARITIES

The interface is similar to that found in the other educational CDs reviewed, except it also features a powerful search facility. Entering text to search for is always slightly inconvenient using the CD32 because of the absence of a keyboard, but once this is done it will scan through the package's 10,000 word database remarkably quickly and give you a list of connected articles.

Along with the advantages of its presentation and diminutive size in comparison to a printed encyclopaedia, the Grolier Electronic encourages curiosity in its users because of the cross-referencing tools included. Articles lead on to related topics, or you can click on words in the text and perform a search at the press of a button.

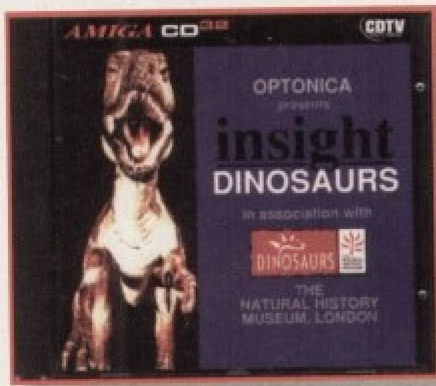
Yes, it's been around for a while now but it remains an impressive product regardless. Considering the price, anyone with a CD32 should invest in this package and hope that serious releases of a similar quality will appear for their machine in the near future.

The bottom line

Product: Grolier Electronic Encyclopaedia
Price: £29.99
Supplier: Epic Software
Tel: 01793 490988

Ease of use	**9**
Implementation	**8**
Value for money	**9**
Overall	**9**

Insight Dinosaurs



Educational tools targeted at CD are few and far between so far on the Amiga, and in my mind Optica's Dinosaurs remains one of the best examples of what can be achieved on the platform with a little effort.

While it's a learning experience, the makers have remembered the first rule of computer education, by which I mean it should be fun to use. Consequently, the emphasis of Dinosaurs is on colourful pictures and sound combined with an easy-to-use interface.

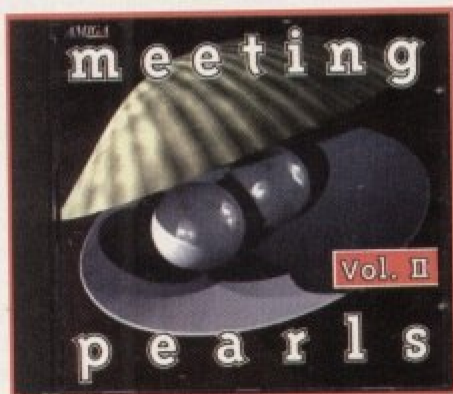
Dinosaurs was actually designed for the CD32 or the CDTV, but we had no problem running it from a CD-ROM drive using Squirrel emulation software, and this should now make it of wider appeal to a new market. The CD's menus are far more visually appealing than on the other educational packages reviewed here, thanks to the use of large buttons with well drawn dinosaur packages representing various topic areas.

The CD is divided into three main sections. First the Life of a Dinosaur includes an explanation of hunting patterns, diet and digestion, and the natural attack and



The interface is about as visually appealing as you could hope for, but it's also very simple to use

Meeting Pearls

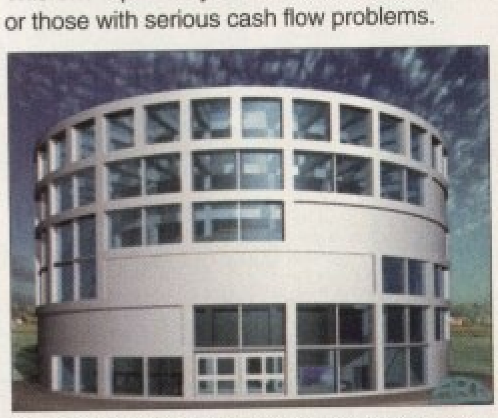


Another general collection of utilities, games, graphics and the rest, this CD comes to us from Germany and is the second in the series. Created by programmers who gather for these meetings, the relative low price of this compilation comes down to the fact that all the programs were provided free of charge.

The makers have tried to give Meeting Pearls a particularly user-friendly front-end, but unfortunately it hasn't quite worked. Hypertext pages, for example, lead on to various categories on the CD, but they are so bogged down with graphics that getting anywhere can be a very slow process.

There doesn't appear to be any guide summarising the contents of each file, an omission that leaves it lagging behind the Aminet CDs when it comes to ease of use.

On the plus side, it is an unusually low-cost CD that includes some interesting material, with 25Mb of terminal programs, 9Mb of music programs and 10Mbs from 'The Party '94' featuring as just a few of the disc's highlights. Despite this, the inferior organisation of the CD and the fact that there's too much untranslated German left me rather lukewarm about Meeting Pearls. This one's probably best left for the CD addicts or those with serious cash flow problems.



The collection includes a bit of everything - here we have an example from the pix drawer

The bottom line

Product: Meeting Pearls
Price: £9.99
Supplier: Schatzruhe
Tel: 0049 6171 85937

Ease of use	**7**
Implementation	**6**
Value for money	**9**
Overall	**7**

defence mechanisms the creatures evolved. The second section, on the other hand, expounds on the main theories behind the extinction of the dinosaurs. Finally, the third section is an index for immediate access to information on a particular species.

With a dinosaur quiz and chinese puzzle thrown in for good measure, this is an excellent learning tool for children and, for that matter, one which will keep the parents intrigued for a fair while too.

The bottom line

Product: Insight Dinosaurs
Price: £39.99
Supplier: Optica
Tel: 01455 558282

Ease of use	**9**
Implementation	**9**
Value for money	**9**
Overall	**9**

Insight Technology

In contrast to Dinosaurs, Technology is not a topic that will the have average child buzzing with excitement and curiosity. All the more reason to make a professional job of the CD and use the potential of the medium to liven the subject up.

Unfortunately though, it was made by the same people as the Dinosaurs CD – this product came out earlier and lacks a lot of the polish of its successor. Even on booting the CD up, the menus look rather drab in comparison. It all works in much the same fashion as Dinosaurs but the user has to scroll through a lot more grey text indexes here. Then, when you do get to the sparse video sections, it's of a poor quality with an often all too brief voice-over to be informative.

Click on the tractor picture, for example, and the voice-over tells you nothing more than that the tractor replaced animals as the most important farming aid. This is followed by a three-second film of a tractor turning around in a field – basically it's pretty uninformative.

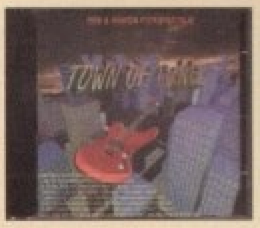
In fairness, the animated diagrams of how the machines work is relatively helpful. This, however, fails to make up for the overall weakness of a package tha was dull in the first place and which is beginning to look very dated now.

The bottom line

Product: Insight Technology
Price: £39.99
Supplier: Optica
Tel: 01455 558282

Ease of use	**8**
Implementation	**4**
Value for money	**6**
Overall	**6**

Town of Tunes



While the title might make the average consumer flinch with embarrassment with a capital E, this CD from the Scandinavian CD-ROM Publishers is an interesting collection of sound modules, midi samples and rather risqué pictures. The most hyped contents of the CD are the 960 modules forming a solid library of all types of music. Quality varies from module to module – some hark back to the day of C64 games music while others use the latest electronic gear to produce their synthetic sound.

Zip files have been included for BBS use to aid uploading and downloading times, and there's also some special mixes of popular tunes including groups such as 2Unlimited, Snap and Blackbox.

Other sound files consist of midi and sample data, of which there are several hundred to choose from. As something of a strange bonus, you can also plough your way through song lyrics from bands such as Aerosmith, ACDC, Anthrax and solo artists (I use that term loosely) such as Paula Abdhul.

It's good to see that the necessary players have been included, but it would have been nice if the producers had given the front-end the same ease of use as the Aminet CD collection, where viewers and sound players are already up and ready to run and listed in hypertext-like links for selection. Maybe next time.

On a more cautionary note, the CD also includes promotional material for other products produced by the Netherlands team. These include soft porn pictures of Japanese ladies clutching at various parts of their anatomy and some rather surprising/shocking (depending on your view point) pictures of Manga-style explicit material.

While I would assume the material is not illegal in this country, parents should be advised that the disc does contain such material and distributors should put some kind of label on the front of the package to warn potential buyers.

This aside, Town Of Tunes is a rather useful collection for musicians needing instantly gratifying tunes, samples and other oddities to play round with. Recommended.

The bottom line

Product: Town Of Tunes
Price: £19.99
Supplier: 17 bit Software
Tel: 01924 366982

Ease of use	**7**
Implementation	**8**
Value for money	**8**
Overall	**8**

Lightwave Enhancer

When Imagine Enhancer surfaced on the scene a few months ago, it dropped jaws all over the Amiga community with a range of objects and backgrounds to inspire the best 3D artists. With the arrival of Lightwave Enhancer from Oberland, hopes were high that this CD collection of objects, macros, maps, brushes, backdrops, fonts and more would prove equally as successful.

The first hurdle to overcome once the CD is up on the Workbench is the installing of the relevant libraries into Lightwave. This is a hassle which doesn't happen with the likes of 3D Arena from Almathera – there was various going back and forth as I tried typing in where the files should go. Like the Imagine Enhancer it can be overcome, but there really shouldn't be any need for fiddling round installing and copying for this price.

Get past this though and you have access to a multitude of different facilities to enhance the number one animation package. Let's get the disappointments out of the way first though – there are seven objects on offer which are of a very high quality and rather familiar to the owners of the Imagine Enhancer CD. Unfortunately, it's a small number to have – the large library of furniture on the Imagine Enhancer CD has not been ported across to this version.

On the plus side, 25 macros have been included for use in Modeller which produce a variety of differing effects, from exploding the faces of an object and turning any picture into a reflection, to creating a Wavemaker-like storyboard.

Easy to operate and fully explained via text on screen as you select them, these are one of the most valuable sections in the whole CD. There are eight fonts that can be loaded straight into layout for immediate manipulation – no need to extrude any of them.



The Magazine font, for instance, boasts an Art Deco style and is of a very high quality. Then for the texture and backdrop freaks, the CD has over 150 examples displayed in a variety of different screen sizes.

Summing up, if you want lots of objects to play with then go for Almathera's 3D Arena, but for textures, macros, animmaps and lots of other odds and sods to make life easier, then Lightwave Enhancer is a very promising CD – just watch out for the rather substantial price tag though.

The bottom line

Product: Lightwave Enhancer
Price: £40 approx.
Supplier: 17-bit Software
Tel: 01924 366982

Ease of use	**6**
Implementation	**8**
Value for money	**6**
Overall	**7**

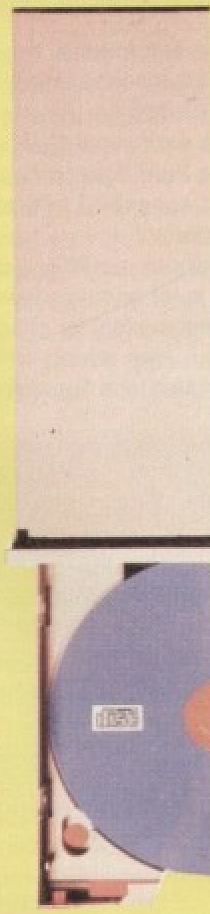
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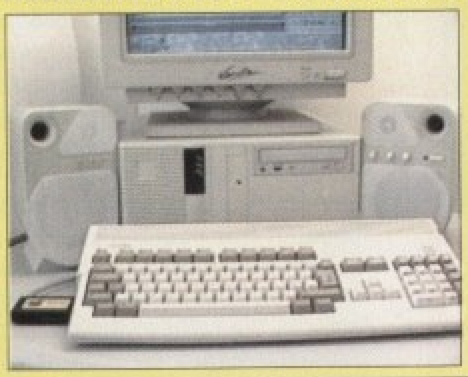
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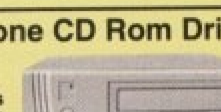
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Subroutine communication



Part 12

Perplexed by parameter passing? Struggling with the stack? Never fear - this month's subroutine-oriented help from Paul Overaa should help demystify the issues

Most programs need to perform a variety of different tasks and many of these, because they concern operations that need to be repeated many times, will be written as subroutines. As well as the fact that this approach saves memory space, there are other benefits to be had: A subroutine that has been written to be generally useful will, after suitable preliminary testing, be able to be used by programmers, safe in the knowledge that it does what it is supposed to do and is error free. In fact, maximising the 'utility value' of such routines is a good design objective because the more generally useful a piece of code is, the more the programmer will find uses for it.

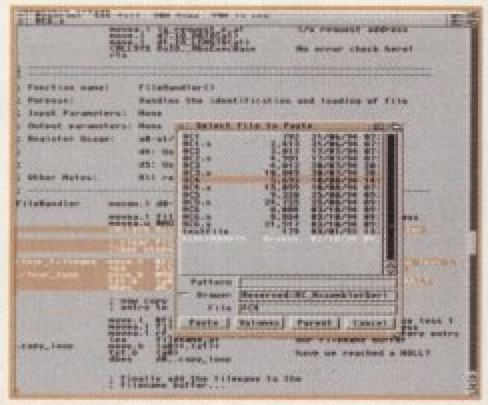
Similarly, maximising the use of either system supplied or self-written subroutines makes program development quicker, and this re-use of tested code also reduces the chances of bugs (in fact you can almost guarantee that any bugs that do occur in your program will come from the recent code you've written rather than any library subroutines being used).

Being able to break up a complex programming task into a series of subroutines is probably one of the most important skills a programmer can learn. However, in order to build programs in this fashion it's also necessary to be aware of the various ways in which information can be passed to, and retrieved from, the subroutine units you create. Over the next couple of issues I'll be going through some of the basic methods available and having done that, will make a start on the design and coding of a 680x0 project that will show the various techniques in action.

The 680x0 chips used in the Amiga provide two basic methods for transferring control to a subroutine. Firstly, there is a jump-to-subroutine instruction, whose mnemonic is jsr, which produces an unconditional jump to a specified memory address. This instruction behaves just like a normal unconditional jump (jmp) instruction, but in addition to placing the specified jump address into the program counter, it also saves a return address. A branch-to-subroutine (mnemonic bsr) instruction provides an alternative relative addressing form of the same subroutine call mechanism using an 8 or 16-bit displacement from the program counter rather than an absolute address.

MEMORY DEPENDANT

Any subroutine instruction sequence requires the processor to 'remember' the address of the next instruction to be executed once the subroutine has completed its job. By convention, this address is called the return address and since subroutines may call other subroutines in the course of their work, a scheme is needed which allows these addresses to be stored and retrieved in an orderly fashion. The data structure used is called a 'stack' and on the 680x0 register a7 is used as a stack pointer (most assemblers, including Devpac, allow 'sp' to be used as an alternative name for register a7).



Modern day assembly language environments like Devpac make it particularly easy to read in and re-use existing routines

680x0 stacks grow downwards in memory and since the stack pointer always points to the last data item added to the stack, this means that before adding new items it is necessary to first decrease the stack pointer by a number equivalent to the byte-size of the object being stored (so that it properly points to the storage locations to be used next).

The jsr and bsr instructions therefore decrease the stack pointer by four, store the return address, and then place the specified jump location into the processor's program counter. The main body of the subroutine will execute just like any other piece of code, but the last instruction of the subroutine will be a return-from-subroutine (rts) instruction which causes the return address to be placed into the program counter. The net result is that the processor, having jumped to and executed a piece of suitably written subroutine code, returns to the instruction immediately following the subroutine call.

In order to be really useful, subroutines must be written so that they are as general as possible. There is, for instance, little point in writing a subroutine that prints the

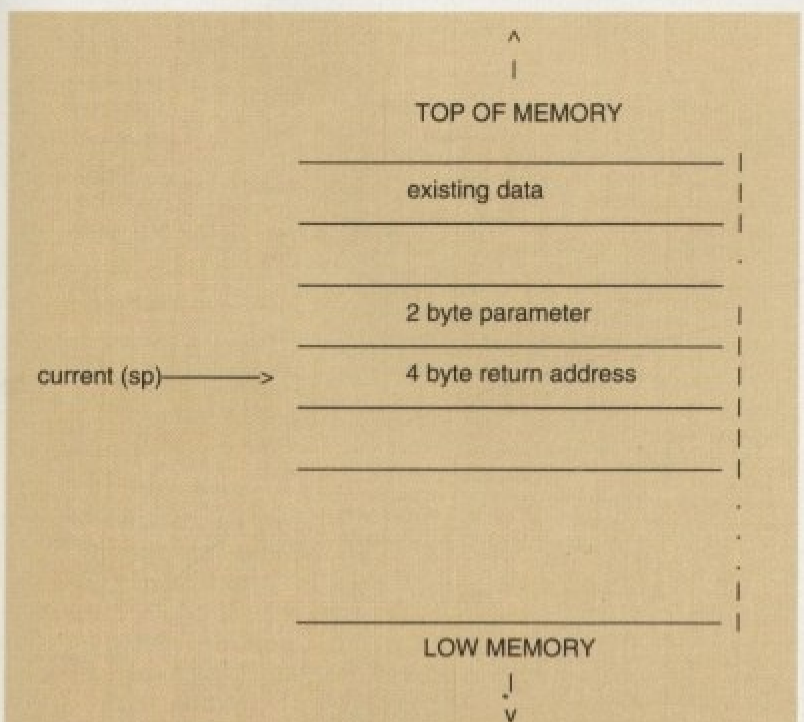


Figure 1: Position of the pushed stack parameter after the subroutine call

message 'Please type your name.' It would, however, be useful to create a subroutine that could display any required text message.

This brings us to one of the most interesting areas of subroutine use – namely, how information can be provided to the subroutine and how any results might be passed back. Data items to be passed to a subroutine are called 'parameters', so the act of arranging to transfer these parameters to the subroutine is commonly known as 'parameter passing'.

There are only two fundamental ways in which data can be passed to a subroutine: Parameters may be placed in the 680x0's registers, or they can be stored and retrieved from memory. The first option is both simple and fast, and since pointers to larger objects, such as strings and other blocks of data, can be used (i.e. the subroutine can be passed the address of the object rather than the object itself), there is little you cannot do. Similarly, the subroutine may return any results (or a pointer to those results) in a register. Examples? You need look no further than the Amiga's run time libraries – Exec, Intuition etc. all use this register-based approach.

FLEXIBILITY

Memory-based parameter passing is inherently slower but, at the end of the day, has the advantage of being infinitely more flexible. To start with there are a variety of simple schemes available – for example, parameters can, if they are known at assembly time, be embedded in the code immediately after the subroutine call itself (providing the return address is adjusted accordingly by the subroutine by adding to it an amount equal to the number of bytes of parameters). The use of global variables, i.e. static locations that can be read from any routine anywhere in a program, is another option that is used extensively.

One powerful memory-oriented approach of particular importance is stack-based parameter passing. The idea is that before you make your subroutine call you push the parameters the subroutine needs onto the stack. These values are collected and used by the subroutine itself and then when the subroutine returns, the stack is then 'adjusted' so that those parameters are effectively removed. Stack-based paarameter passing can be done in several ways: The 680x0's move instruction can, for example, be used in conjunction with indirect addressing and autodecrement to push a value onto the stack like this:

```
        move.w      some_value,-(sp)
push a parameter
        jsr         MySub
```

What must be remembered here, of course, is that after you have pushed the parameter onto the stack, the jsr instruction will have subsequently pushed a return address onto the stack so the final stack arrangement in memory will be looking something like that shown in figure 1. This means that the subroutine needs to look not just at the 'top' of the stack but actually 'into it' in order to extract the parameter. Since the return address is four bytes long we need to use a displacement of 4 like this:

```
MySub       move.w 4(sp),d0          subroutine now
has parameter in d0.
            <main body of subroutine>
            rts
```

The above fragment copies into d0 the two bytes of data immediately above the return address. The snag now is that once the subroutine has returned, the stack pointer is left pointing to the parameter placed on the stack. This situation cannot be left as it is because the integrity of the stack, as far as other items already on the stack are concerned, would be destroyed.

As the parameter is no longer needed, there is little point in removing it via a move (sp)+,d0 type instruction – instead it's faster to numerically adjust the stack pointer so the item is effectively ignored. The code fragment that pushed a word (2 byte) parameter onto the stack would, in reality, then have to include this sort of stack adjusment:

```
        move.w      some_value,-(sp)
push parameter
        jsr         MySub
        addq.l      #2,sp           clean-up stack
```

Needless to say, if you had pushed a long word (4 byte) parameter, a stack adjustment of 4 would have been needed. Incidentally, the Amiga's amiga.lib linker library routines use this type of stack-oriented parameter passing, and it is also a method used by many high-level languages (including C)!

Register preservation and restoration

It is normally advisable to create subroutines which do not alter the contents of any temporary workspace registers they use. The best way to do this is to preserve those registers by pushing their contents onto the stack and restoring them just before the subroutine returns. One way of doing this would be to push/pull the contents of each register singly using instructions such as:

```
move.l          a6, -(sp)               preserve a6 on stack
move.l          a5, -(sp)               preserve a5 on stack
move.l          a4, -(sp)               preserve a4 on stack
            <main body of subroutine>
move.l          (sp)+,a4                restore contents of a4
move.l          (sp)+,a5                restore contents of a5
move.l          (sp)+,a6                restore contents of a6
```

but in actual fact, a special 'multiple move' instruction exists, called movem, which allows this transfer to be done more efficiently when two or more registers are involved.

The easiest way to describe the use of the instruction is to show you some examples: For example, to save on the stack the full 32-bit contents of registers d0 through d7 and a0 through a3, we would write:

```
movem.l         d0-d7/a0-a3, -(sp)
```

and to restore the registers (i.e. pull them back off the stack) we'd use:

```
movem.l         (sp)+,d0-d7/a0-a3
```

As far as placement in a subroutine use is concerned you'll see these instructions used like this

```
MySub           movem.l                         d0-d4/a0-a3,-(sp)   preserve registers
                <main body of subroutine code>
                movem.l                         (sp)+,d0-d4/a0-a3   restore registers
                rts
```

When registers are preserved like this, routines which are expecting parameters to be passed on the stack need to allow for the fact that more items have been pushed onto the stack after the return address. In the above example, nine 32-bit registers are preserved (d0, d1, d2, d3, d4, a0,a1, a2 and a3) so a further 36 bytes have been placed on the stack.

If we go back to the stack-based parameter passing example mentioned earlier and add the above register preservation code, the offset now needed to extract the word parameter variable would be (9 x 4) + 4, i.e. 40, so the subroutine entry code would then be based on this type of framework:

```
MySub           movem.l                         d0-d4/a0-a3,-(sp)   preserve registers
                move.w                          40(sp),d0 parameter now in d0
                <main body of subroutine code>
                movem.l                         (sp)+,d0-d4/a0-a3   restore registers
                rts
```

As you can see from this month's discussions, parameter passing is quite a large topic in its own right. In fact, there are still other techniques to come, although I'm afraid you'll have to wait until next month for details.

> A subroutine that has been written to be generally useful will, after suitable preliminary testing, be able to be used by programmers, safe in the knowledge that it does what it is supposed to do and is error free

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Hard Drive breakdown. Considering this is possibly the most devastating disaster that can threaten a computer, you'd think Amiga owners would be taking every precaution possible to protect their valuable files and programs. Yet everyone has a lazy streak, and backing up is about as interesting and rewarding a chore as ironing your underwear. No wonder many of us never get round to doing it.

Backing your system up, however, doesn't have to be as boring as it once was. There are both software and hardware solutions that can help to make the process less daunting, and there are options that should suit everyone's pocket and needs.

Backing up on to floppy is the cheapest way of securing your data, but everyone would have to admit it's a pain in the backside. To back up a 350Mb hard drive on to floppy will require hundreds of disks, not to mention hours of disk swapping.

The fact is, if you're going to carry out this process regularly and you're dealing with a large amount of data, you're going to need a high capacity storage medium and some method of speeding the process up.

When it comes to hardware specifically designed for this purpose, the most economical method is the standard tapestreamer. Using tape resembling that found in video cassettes, these devices can back up an entire hard drive in a matter of minutes. A high capacity tape drive can store 525 Mb of data and should attain a transfer rate of approximately 5Mb per second.



DAT is the dream solution to the back-up problem, but it's only worth the cost for the serious or wealthy user

SCARCE

Unfortunately, these mechanisms are hard to come by these days, having been almost entirely replaced by technically superior but more expensive DAT systems. A search through all the usual Amiga distributors failed to reveal anyone who was offering the standard tapestreamer – perhaps your best bet would be to buy one second hand.

If you're a very serious Amiga user with large volumes of data requiring regular backup, it might be worthwhile considering the DAT alternative, though you'll need substantial sums of cash to be able to afford one. A DAT drive will achieve a transfer rate in excess of 10Mbs per second, reducing back up times radically. What's more, they will store between two to nine gigabytes of data depending on how much you're prepared to spend. Anyone who is considering DAT should be well advised to buy from a distributor who can provide Amiga installation and maintenance advice since, as with many SCSI devices, the sort of documentation you get with a DAT drive will probably be

Video Back-up

Buying a DAT tapestreamer may be the dream solution to the back up problem but let's face it, very few of us are prepared to pay that sort of money for a precautionary device. Does this leave all but the affluent Amiga owner in the position of swapping floppy disk after floppy disk?

Thankfully, the situation is not anywhere near as grim, thanks to Power Computing's Video Backup System. Designed as a convenient, powerful device that works with a standard Video Recorder, it's also economical enough to make sense to even the stingiest Amiga owner.

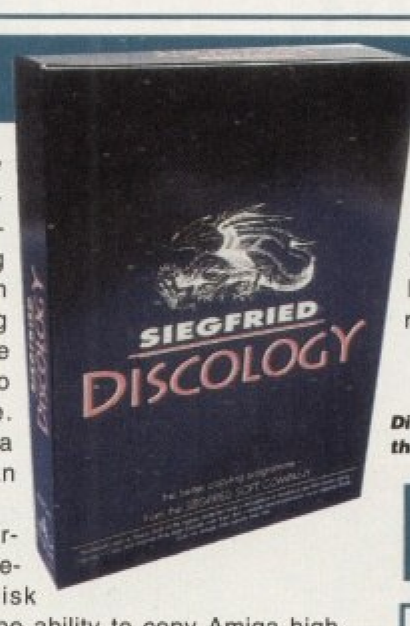
Using this product, a large hard disk or hundreds of floppys can be backed up onto a standard video tape, which makes the storage medium about as cheap as you could hope for – 200Mb can be squeezed onto one four hour tape. The package comes in video-style casing (though you'll have to provide the cassette yourself), and includes either SCART or

Commercial copiers

Backing up your software packages may be less important than securing an entire hard drive's worth of data, but then floppies are more vulnerable to damage than just about any other storage medium. For years, X-Pro Copy was the most popular and respected copying program, but now Siren Software have stopped supplying it and have switched to the new Discology package.

The advantage of commercial copiers over PD counterparts is that they come with a dongle which gives it great advantages in getting around software protection. Many developers protect a program by varying the length of tracks on the floppy – if you try to copy these via a standard AmigaDOS method it won't work because the Amiga will look for 80 tracks of a certain standard length. The hardware that comes with these commercial copiers means that copying is made directly from track to track without any need for them to be read by AmigaDOS, thereby bypassing the problem. Discology is a powerful package which automates the copying process, so you can just keep chucking disks into the drive without having to OK it all the time. Protected Amiga and IBM disks can both be copied.

A high-speed formatting facility, integrated floppy disk compaction, and the ability to copy Amiga high density disks are a few of the extras that make Discology highly appealing. Those who haven't got a virus checker will also benefit from Discology's ability to detect bootblock and link viruses.

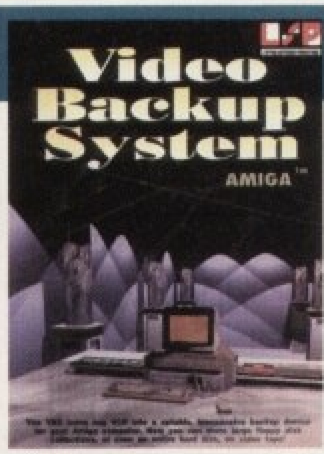


Discology, the disk copier that's set to beat X-Pro

Discology can also multitask, which the last version of X-Pro I saw was not able to do. Small additions like this combine to make Discology the best commercial copier currently available – let's just hope it gets used for back up purposes rather than piracy.

The bottom line

Product: Discology
Supplier: Siren Software
Tel: 0500 340548
Price: £39.99



A flexible back-up option that is mercifully cheap compared to some alternatives

PHONO leads, the Video Interface, and the all-important software contained on a single floppy.

The system has a number of helpful features including verification and error correction facilities to optimise the reliability of the process. Naturally, the software allows you to select files and directories to back up, and it's possible to restore selected files off the tape if you don't want to restore the whole lot.

Ease of use is greatly increased by a well organised interface and a short but comprehensive manual which includes helpful illustrations. What's more, the program performs a connection check to ensure the hardware is correctly hooked up for reliable data transmission.

Another plus point is the way in which the software automatically maintains log files which contain the title and counter position for every backup on the tape. Then, when it comes to searching for files, a visual header precedes every file on the tape with title and date details.

Add to that the fact that Power's system will also back up a full Amiga floppy in one minute and restore it just as quickly, even onto an unformatted disk, and this product begins to look like the only sensible back up solution for those with limited funds.

The bottom line

Product: Video Back-up System
Supplier: Power Computing
Tel: 01234 273000
Price: £65 SCART £60 PHONO

aimed at the PC. White Knight Technologies (01920 822321) do a range of internal DAT drives starting at £729 for the 2Gb version.

A final point about DAT is that it can be accessed like a large hard drive using Moonlighter Software's Tapeworm (available from Ramiga – 01690 770304). This works best with sequential data like animations or long pieces of music, although it transfers data much slower than a hard drive and can take up to one or two minutes to find a file.

secure

Back up or lose it. Gareth Lofthouse reports on some of the safety measures available

Virus killer

An alternative threat to a hard drive crash is the risk of infection by computer viruses. Though these are less talked about than when they first appeared in the late '80s, there are new viruses being invented all the time, mainly with the intention of ruining as many people's systems as possible.

With this in mind, Siren Software have released Siegfried's Anti Virus Pro, a software package that's intended to be the ultimate Amiga aid in the detection and prevention of viruses. When you realise that Anti Virus carries a £40 price tag, the first question that will spring to mind is 'Is it worth it?' considering you can get PD virus checkers for virtually nothing.

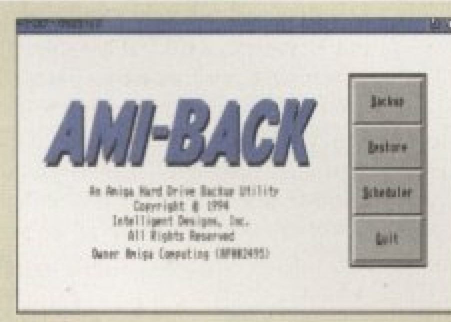
Certainly, Anti Virus appears to have just about all the features you can currently hope for from this type of program. Virus searches can be made not only on floppies but also hard drives, RAD or CD, and the software allows for the quick tracing of link and file viruses including trojan horses, worms, bombs, and disk validator viruses. The problem is, however, that though it can do these things and a lot more, Virus Checker 6.53 can match it for just about every facility, yet it can be downloaded for free from virtually any BBS (and you won't even have to upload anything in return).

Another downfall is that Siegfried are trying to combat the new viruses released every month by offering a software update service for owners of Anti Virus, but they are unlikely to be able to beat the monthly revision Virus Checker benefits from.

All in all then, it's hard to justify Anti Virus's asking price considering it doesn't offer much more than its free PD rivals.

The bottom line

Product: Anti Virus
Supplier: Siren Software
Tel: 0500 340548
Price: £39.99



Amiback is one of the most desirable HD Back-up programs you can own, but whether you can get your hands on it is another matter

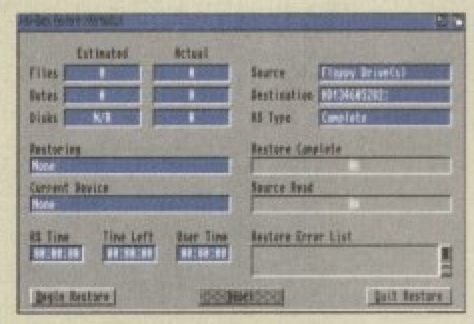
HD Back-up software

Tapestreamers and DAT are best used with either Quarterback 2.0 or Amiback 6.0, both of which are powerful pieces of back-up software. Unfortunately, the makers of Quarterback went bust and we've not had much luck finding anyone who can supply us with Amiback either.

Nevertheless, these commercial tools are so useful that if you can get your hands on either of them it will be well worth your while. Amiback, for example, can back up a 900k directory in just 47 seconds and has flexibility in terms of its support not only for tapestreamers and DAT, but also floppies and high density floppies.

If you can't get access to these programs it is possible to use HD Backup which is included on Workbench 2.04 and higher, but this is far from ideal. HD Back up is notoriously unpleasant to use with a poor interface, unnecessary complexity of use, and an inability to back up more than one partition or hard drive at once.

There are PD alternatives available – for example, Epic Software's HD Tools includes a back up program (call 01793 490988). A word of warning to those with less technical experience, however, is that there didn't appear to be a read.me file to explain how to use this software.





EMPLANT

E586DXSM Emulation Module

The new E586DX emulation module offers a high speed 586DX (FPU, MMU, and new instruction set) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, Windows 3.x, and even Chicago! There is support for MDA, CGA, EGA, VGA, SVGA video modes (dependant on hardware, AGA or a supported graphics card is required for VGA/SVGA) , sound, joysticks, floppy drives, hard drives, extended memory, and more! Requires PC BIOS, not supplied.



Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IIci. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours! Up to 24 bit (16 million+) colours is supported using third party video boards. Built in multiple file transfer allows for quick and easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied).

The possibilities with a multi-platform machine are endless. Now you can take advantage of a whole host of great software previously unavailable, and use them to compliment each other. By upgrading your Amiga (extra memory, faster processor, etc) you instantly upgrade your emulation too! All major graphics cards are supported for improved video performance such as: CyberGraphics, Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, PiccoloSD64, EGS110/24, and OpalVision!

Blittersoft are the exclusive European distributors for Utilities Unlimited, providing full technical support/upgrade/warranty services All emulations require a 68020 or better.

EMPLANT BASIC	£239.95
EMPLANT OPTION A (AppleTalk ports)	£269.95
EMPLANT OPTION B (SCSI)	£269.95
EMPLANT DELUXE	£299.95
E586DXSM MODULE	£ 99.95

New Pricing!

PICASSO II

PICASSO II is the leading graphics card on the Amiga. It offers unrivalled support and retargetable graphics on any Zorro based Amiga. Workbench emulation offers 256 colours, even on non-AGA machines (Requires OS3.1) at resolutions up to 1600x1280. Supports HiColour (16 bit) and True Colour (24 bit) graphics - 16 million colours!

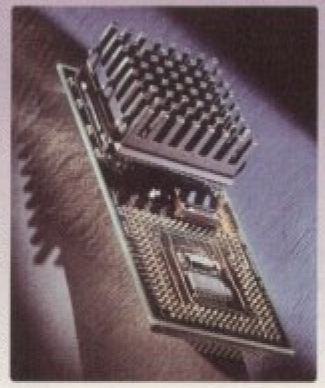


There is no longer a Chip RAM limitation and screen configuration is provided through PicassoMode, which allows the creation of custom screens quickly and simply.

PABLO is the new Video Encoder option for Picasso II, expanding it with two additional video ports, one standard Composite Sync Signal, and one S-VHS (Y-C) compatible port. All PAL compatible video devices can be plugged into Pablo, such as a colour TV or a video recorder. Pablo has 15KHz overload protection and is supplied with cables/adapters, Animation examples and a 24 bit animation player.

PICASSO II 2MB	£299.95
PABLO VIDEO ENCODER	£129.95

DOUBLER 4000 - 50MHz



Blittersoft deliver the fastest 68040 accelerator ever for the Amiga 4000/040, setting a new breakthrough in price and performance. The new Doubler 4000 50 MHz 68040 accelerator delivers across-the-board speed increases for all applications and system functions, translating into a significant productivity gain.

This powerful "plug and play" accelerator is 100% hardware and software compatible, since it still uses a Motorola 68040 processor. It offers an affordable upgrade that makes sense, requiring no special software. For a moderate price, users get twice the processing power, yet retain 100% of their Amiga investment. No software upgrading, reconfiguration or incompatibilities.

The Doubler 4000 accelerator is an easy-to-install daughter board that simply replaces the 25 MHz 68040 CPU socket on the Commodore Amiga 3640 board. Anyone who can install a SIMM can install the Doubler 4000. Customers are supplied with photo-illustrated installation instructions plus the necessary extraction tool to perform the installation.

Simply putting a faster processor into an Amiga does not help much unless the system can supply enough data to keep it busy. That is why the Motorola 68040 contains a large on-chip cache. This cache frees the Doubler 4000 to work semi-independently of the Amiga memory subsystem. In fact, 85% of the time the cache contains the data and instructions necessary for the Doubler 4000 to operate at full speed.

The Doubler 4000 includes an on-chip math co-processor, and will dramatically speed up any application - such as rendering - that depends on calculations. It is completely reliable and system safe. An integral cooling system ensures that the Doubler 4000 runs cooler and more reliably at 50 MHz than the original processor.

RELATIVE PERFORMANCE (SysInfo V3.15 benchmarks.)

DHRYSTONES	- A4000/40	: 17,973	DOUBLER 4000	:	36,126
CPU MIPS	- A4000/40	: 18.76	DOUBLER 4000	:	37.72
DISK MBYTES/SEC	- A4000/40	: 1.40	DOUBLER 4000	:	1.58

DOUBLER 4000 50MHz ACCELERATOR £399.95

NEW

ARIADNE

Ever wanted to set up a network but been afraid of the complexity involved? Now there is a simple but effective solution for any Zorro based Amiga. In addition, Ariadne has two extra parallel ports and includes Commodores industry standard software solution ENVOY.
Ariadne offers 10Base-2 (Thin ethernet, coax cable) and 10Base-T (Twisted pair, western jacket), Socket for a boot ROM, SANA-II compatible driver for ethernet and parallel port, 32Kb cache to support the CPU and full manuals.

You can hook up additional Amiga`s to the parallel ports with Liana.

ARIADNE £219.95

LIANA

Liana is the ideal solution for a quick, easy yet efficient connection between two Amiga`s. Simply plug the special cable into the parallel port, install the software and you are ready to go. Now you can share hard drives etc. without on a small budget. The software supplied is ENVOY.

LIANA £64.95

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MULTIMEDIA PICASSO

NEW

Introducing a brand new package, offering stunning value for money! This all new package comprises of :

The PICASSO II graphics card, full 2Mb version. Unmatched comptibility and support!

The PABLO VIDEO ENCODER, fits neatly on the Picasso II board and offers fantastic quality.

TVPaint Junior, a great entry level 24-bit package.

Cinema 4D V1.5, superb rendering package.

This total solution allows you to release your creativity in stunning 24-bit quality. No other package offers so much value and performance.

MULTIMEDIA PICASSO £399.95

OS 3.1



All packs contain the appropriate ROM(s), Workbench 3.1 disks, three manuals and detailed fitting instructions (*).

Much of the latest software requires the latest operating system. Now you can upgrade to KickStart 3.1 for virtually any Amiga. Non-AGA machines can deliver a 256 colour Workbench with OS3.1 and Picasso II.

OS3.1 FOR AMIGA 500 OR 2000	£89.95
OS3.1 FOR AMIGA 600, 1200, 3000 OR 4000	£99.95

* Please specify machine. Note that revision 3-5 motherboards require linking to be added. We strongly recommend that a professional computer repair/service company undertake fitting. We cannot exchange any damaged or incorrectly fitted components.

Blittersoft

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SYSTEM

Your essential guide to the world of Amiga gaming

Under the system spotlight

High Seas Trader 90
Tower of Souls 94
Super Loopz 98
UFO A500 106

System survey

Let us know your opinions on our games section and win some prizes in the process

A fistful of fun

System puts the summer's hottest hopefuls under the spotlight



SYSTEM ANALYSIS

88 **Beat The System**

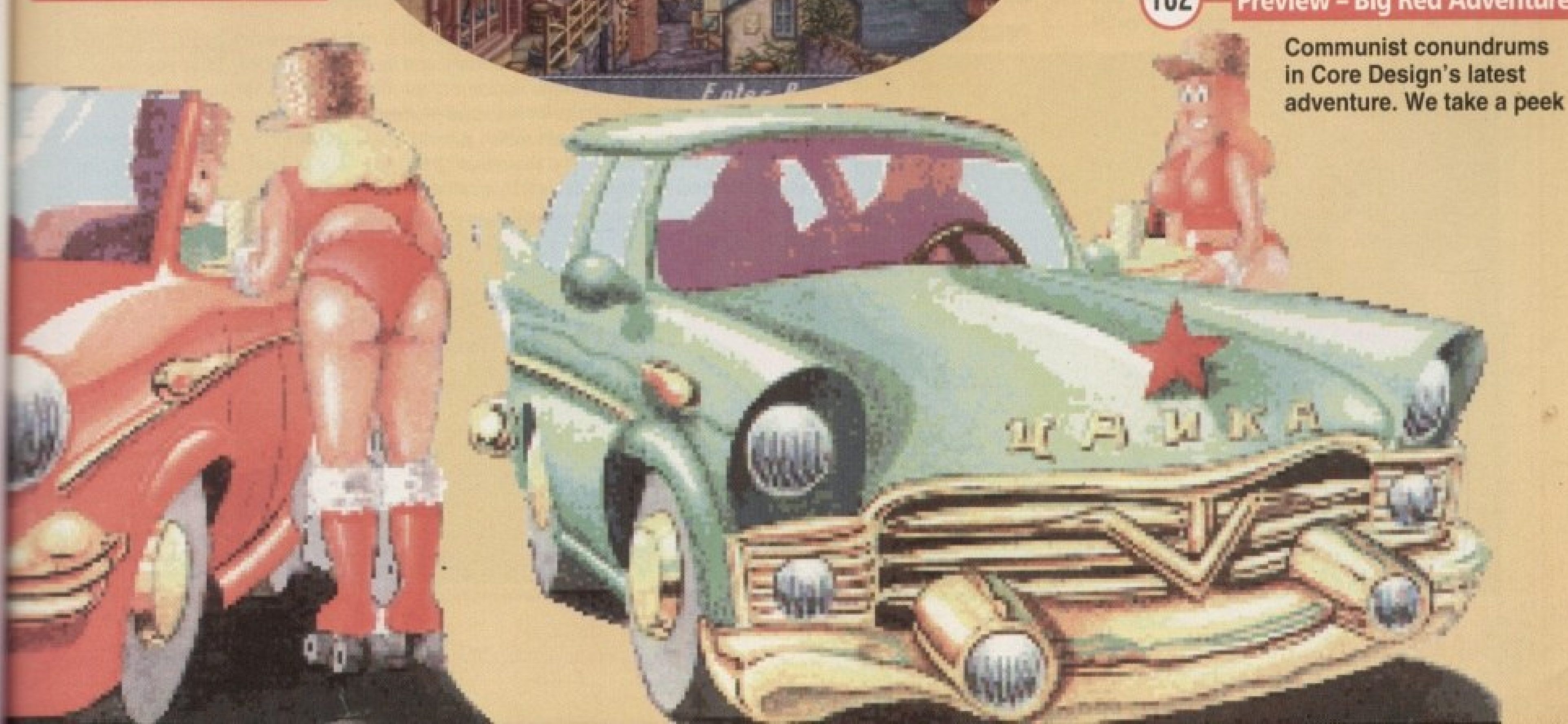
Stuck on Ultimate Soccer Manager? Getting in a twist over our Speris Legacy demo? Take a look within

98 **Preview – Limbo of the Lost**

Gore galore is promised in Tri-Logic's new adventure game

102 **Preview – Big Red Adventure**

Communist conundrums in Core Design's latest adventure. We take a peek



Monster Manga

Fans of Manga will be pleased to hear of the latest releases from Manga Video this month. Godzilla vs. Mothra, released on 1 May, is based on the 1964 film, Godzilla vs. The Thing. The movie is the fourth in Toho's big budget remake series and is directed by Takao Okawara and Koichi Kawakita. The plot sees a giant meteorite hurl to Earth setting off volcanoes and earthquakes which awaken Godzilla from his slumber. The landslides reveal a mysterious sphere which truns out to be the egg of Mothra and surprise – it hatches! More trouble is in store as the earthquakes have also caused Mothra's enemy, Battra, to rise.

Manga Video also kick off their new six-part series, Angel Cop, where the deadly but sexy Angel, a member of the Special Security force, is sent to fight a new wave of crime in Tokyo. This story follows the Red May, a dangerous terrorist organisation. Part One also includes the first episode of the comic strip, Bone 'Ed, The Chainsaw Messiah.



Part One of Angel Cop is due out this May



Toho's budget remake series now includes Godzilla vs. Mothra

system online



Summer's here and the heat is certainly rising on the Amiga games scene. Tina Hackett brings you news of the hottest releases that will be coming your way

Zee sheep in Zeewolf's clothing

Binary Asylum are busy at work on the sequel to their excellent helicopter sim, Zeewolf. It promises to keep the same successful gameplay as before, but with a variety of new missions and improvements. They are still aiming to keep the tactical element and the same freedom of mission order.

The company are also expanding their development team with the appointment of Chris Newcombe, previously a Senior Software Engineer at Sega Europe and a programmer on Gunship 2000 for MicroProse.



The original Zeewolf was a great success for Binary Asylum

Manic Pinball

It certainly is Pinball Mania at the moment – literally! 21st Century, the people behind the hit pinball sims Pinball Illusions, Pinball Dreams and Pinball Fantasies, are working on yet another that promises to better its predecessors. At the moment the Amiga version isn't definite, but keep your fingers crossed because this one looks like being the best yet!

There are going to be four tables which will have the themes, Tarantula, Jailbreak, Kick-Off and Jackpot. They will all include animations such as moving switches and passage spinners, and there will be a minimum of three flippers on every table. The controls will also be user-definable.



Play to win

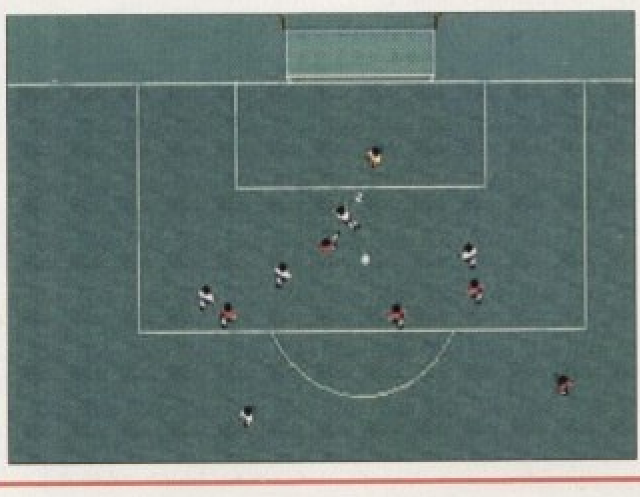
The popular footy management game, Player Manager, has been given a fresh lick of paint and the new moniker Player Manager 2 to bring you a sequel.

You actually get to play in the matches and can choose from options such as Personal Challenge – where you must reach a set target – or Knock Out – where four players test their skills against each other.

There are also all the other usual managerial options where you'll have to decide everything from tactics, to carrying out individual player team talks and deciding on stadium improvements.

A Ray Trace option will also make for a highly impressive game. This allows you to design your tactics accurately, and by applying the Ray Trace you can pinpoint player limitations, decide on the best positions for your players, and choose the right tactics for individual matches.

From what we've seen so far, it looks like falling into the new genre of management games we're seeing at the moment that tend to go for a highly polished, realistic graphical style rather than the totally stats-based approach.


Player Manager 2 will have many new features and will boast some very realistic graphics

Get the power

Ever-busy Impressions are working on another strategy title called Power House. It's set in the future and puts you in the role of a power giant competing against three other ruthless rivals, all vying for the earth's natural resources.

It's your aim to build a profitable business empire without destroying the earth's already crumbling eco system. You can choose from nine types of energy to invest in, from the renewable to the fossil fuels.

You will also have to do things like test drilling and mining, or construct oil rigs. Negotiating territorial rights and extraction rights is also important. Power House will be available this June and it certainly sounds different.





Play the part of a ruthless power baron

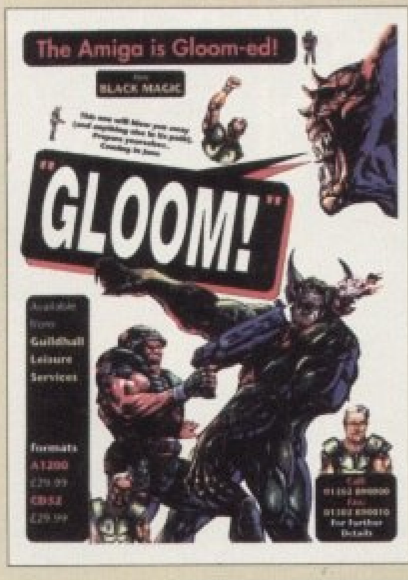
In their Shadow

Thanks to all those who entered our Shadow Fighter competition a couple of months back. We had a good response and the standard of entries was high. But as they say: There can only be one winner! So congratulations to Sarah Snape from Sheffield who gets a CD32 courtesy of Gremlin. The five runners-up are Marek Walford, Adam Scott, Tom Wilson, Craig Humphries and Tom Gaskell. Each receive a copy of the excellent beat-'em-up, Shadow Fighter.

Living in Fear

PC cynics who claim that Doom can't be done on the Amiga may soon be eating their words. A huge effort is being made on the part of Amiga developers to find the ultimate Doom beater, or at least an equal to it! Death Mask tried and failed, Alien Breed 3D is in the pipeline and already looking pretty stunning, and two more contenders are raring up to take the challenge.

Fears is just one of theses titles. Written by French team MANYK and published by Bomb Software, Fears aims to provide a good combination of action and some of the more Doom-like strategy aspects. You will also be able to link two Amigas together via a null modem cable for a networked game.



The other is Gloom and is being developed by a New Zealand team called Black Magic. The programmer, Mark Sibbly, has already earned a top reputation for himself for the hit game Guardian, among others, and the programming language Blitz Basic. Gloom guarantees gore in abundance and two different graphical styles which will alter the mood of the game dramatically.

Both games will be released this summer.

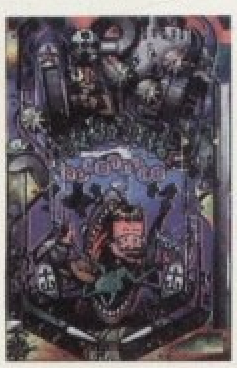


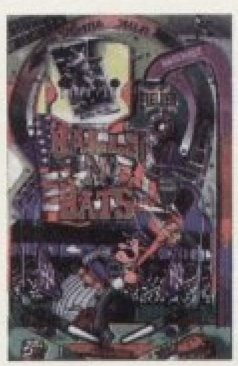
Fears – one of the games lining up to try and challenge Doom

Obsessive behaviour

In my days on ST Review magazine I remember there was a certain title that really grabbed my attention. So much in fact, that I awarded it a huge 98 per cent. And now, rumour has it that this very same game (plus a few tweaks and improvements) is heading its way on to the Amiga.

It's a pinball game by a relatively new Swedish team called Unique Developments. When I saw the game it had four completely stunning tables: Aquatic Adventure, Balls and Bats, Desert Run and X-ile Zone, but an extra table is promised for the A1200 version, along with 256 colours and multi-ball.







Look forward to this quality pinballer, Obsession, soon

In Brief

Tiny Troops

Mindscape are working on a multi format release across the CD32, Amiga, PC and PC CD-ROM called Tiny Troops. It is a fun strategy game featuring two warring races of bugs across six different worlds. A June release is planned and it will have 70 different missions.

To the Hilt

Kellion, the very new publishers behind Leading Lap and Ants, are working on a Laser Squad sort of title called Hilt, but based around robots. It'll be ready in a few weeks and we'll hopefully be bringing you a full review soon.

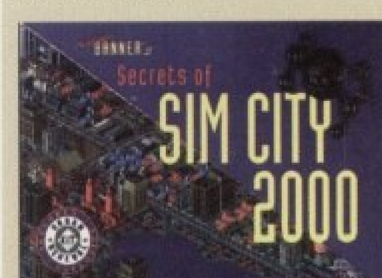
Explosive game

Kent based Arcane are working on yet another Amiga title along the lines of Bomberman and Dyna Blaster. It's a Blitz Basic game that will have a multi-player link mode for ultimate playability

Hot in the city

Bruce Smith Books are continuing there range of Gamers Guides with their latest addition, Secrets of Sim City 2000. Written by Andrew Banner, it contains 128 pages of hints and tips to help players build the perfect city. It also contains details on the recently released Urban Renewal Kit.

Priced at £9.95, you can find the title in major book stores or order via Computer Bookshops on 0121-706 1250.



Stuck on Sim City 2000 – help is at hand

System Selections

With all the new releases available your probably wondering which ones to spend your hard-earned cash on. Well, take a look below......

All Terrain Racing



On the balance of things it beats its predecessors because of a greater long-term incentive. The rewards of winning the money, then spending it to soup up my motor filled me with a boyish flush of satisfaction – and that's the sort of thing to keep a player going. It's got the looks, the features and the speed to take the chequered flag. Go forth and spend your money.

SKIDMARKS 2



This is one hell of a race-'em-up it has to be said. It's great fun especially when you have two or more players and it works really well in bringing out the competitive edge in you. This is one of the most playable and fun race-'em-ups around and with the vast amount of new features added it's certainly worth a look, even if you have the original.

TFX



With a suitably accelerated machine, this game has the visual flair and excitement to attract fans usually put off by the Sim-designers' fetish for complexity. Problems aside, this game beats its closest rival both in detail and speed. TFX is the best sim on the Amiga of all time, and that's a fact unlikely to change in a long, long time.

Manchester United: The Double

The Double is a true football game for true football fanatics everywhere. Krisalis have broken out from defence, played it beautifully through the middle, knocked it out to the wing, gone round two of the opposition and delicately curled another golden goal, past the flustered keeper, into the top corner of the net.



Ultimate Soccer Manager

This is one quality title and thankfully it's different from all the others – and what's more it's fun! The whole game comes across as extremely polished with a great attention to detail. Highly recommended to both fans of the genre and those that would normally give this a wide berth.

The scores on the doors

A guide to how our revolutionary scoring system works...

We're sure many of you are now familiar with our new scoring system, but for those reading *Amiga Computing* for the first time and those who might have forgotten exactly how it works, here is our guide to the System scoring, err system.

In our opinion, review scores have lost their context as a percentage; some products receiving scores which were only a few percentage short of being the "perfect" game, when in truth they were only marginally above average.

OK, so the scores might seem unnaturally low at first, but that's only because other scoring systems tend to be on the high side and perhaps not as comprehensive or honest as they could be.

In the long run you'll receive a more concise and reader-orientated review that's geared towards the consumer.

0-20 This is given to the lowest of the low

21-30 An all-round poor game that may have a single saving grace

31-40 Just below the average, perhaps let down by a few indiscretions.

41-55 Games of this score are roughly average with 50 being a perfectly average score.

56-66 This is an above average game and is worth buying. For this reason it would be awarded the BRONZE award.

AMIGA BRONZE AWARD

67-77 A game of high quality that you as a reviewer would have no reservation in recommending. Anything of this ilk would be awarded the SILVER award.

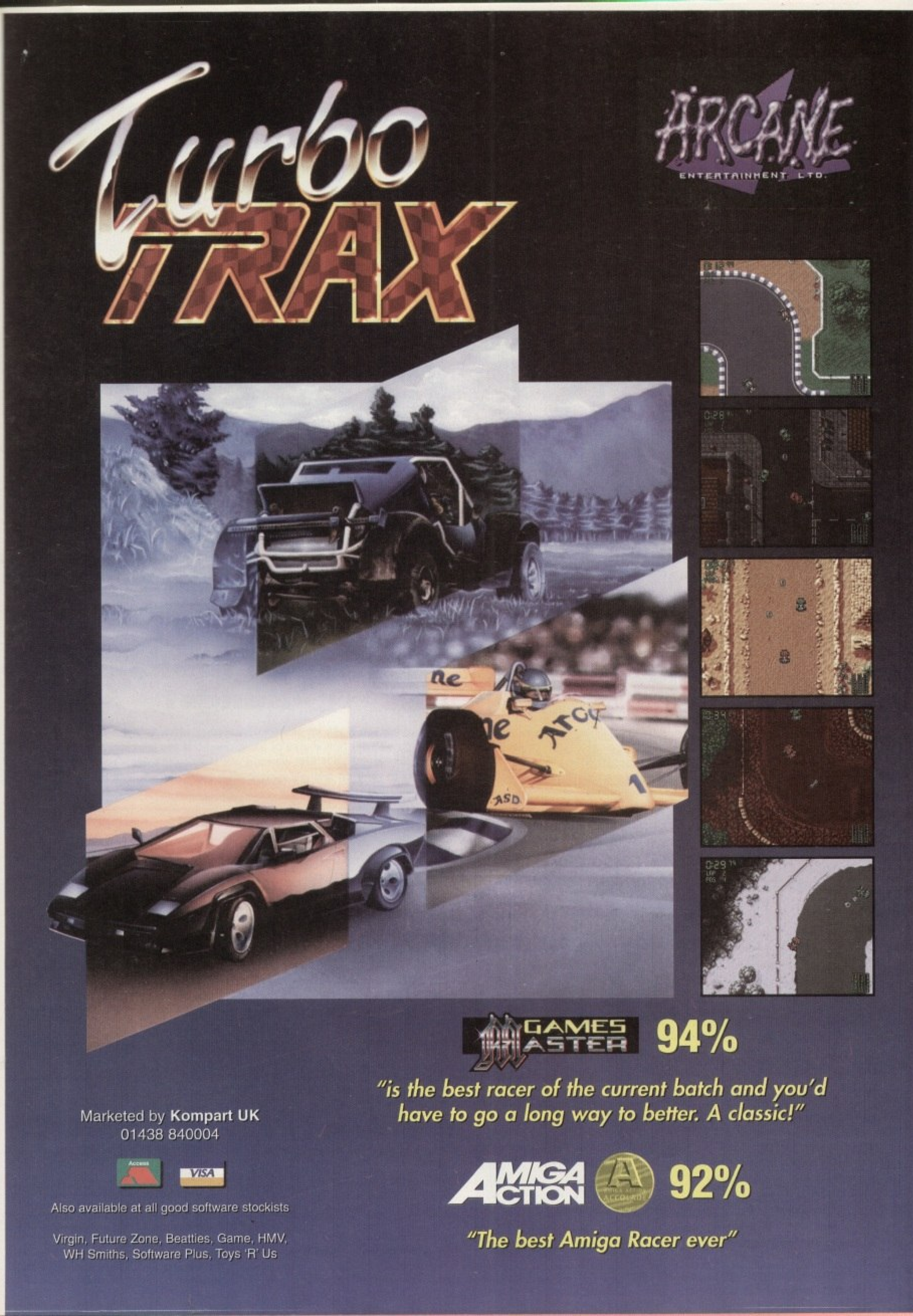
AMIGA SILVER AWARD

78-89 A brilliant title. Definitely worth buying and almost the definitive of its kind. This type of game would receive the GOLD award.

AMIGA GOLD AWARD

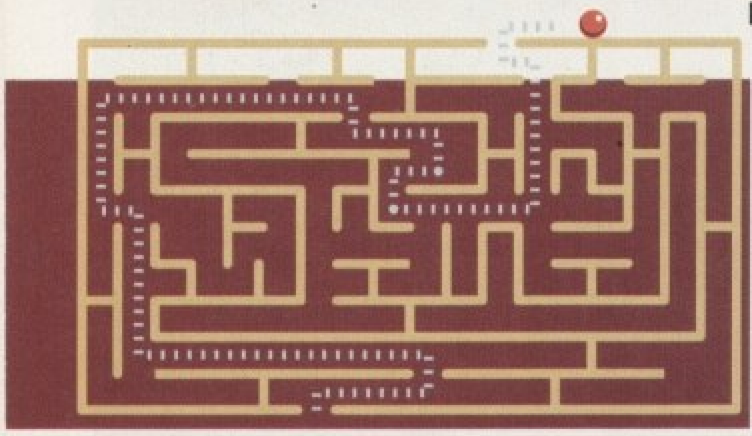
90-100 The best in its genre. This benchmark title receives the PLATINUM title.




Turbo TRAX
ARCANE
ENTERTAINMENT LTD.
GAMES MASTER 94%
"is the best racer of the current batch and you'd have to go a long way to better. A classic!"
AMIGA ACTION 92%
"The best Amiga Racer ever"
Marketed by Kompart UK
01438 840004
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Ultimate Soccer Manager

beat the system



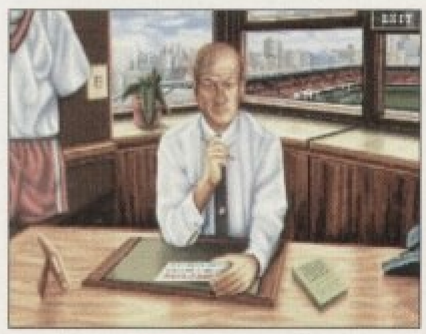
It's a double bonanza this month as we bring you the guide to becoming a successful football manager, and also show you how to tackle our coverDisk demo of The Speris Legacy

Staying on top of your finances

To help you in your quest for soccer glory as a manager, start the game with £5m to avoid heavy debts later on in the season. Use the two weeks pre-season time to improve your stadium in order to generate some gate money to offset against player wages. When you are making ground improvements do it as soon as possible – don't wait around for inflation to increase the price of buildings.

A good idea is to open merchandise stores and food outlets to improve your overall income. Make sure you spread these outlets evenly to generate an even income and only build stands where you get the highest attendances. Keep your ticket prices low for the matches when you're expecting low crowds, and push them up for important cup games against clubs in a higher division.

Plan your building time carefully so you won't end up like Kidderminster or Macclesfield by being refused entry into the next division by not complying with league standards. Increase your ticket prices and merchandising by 10 per cent every season to get the most out of the fans' money.



Don't get on the wrong side of this bloke, or you could find yourself out of a job



If you apply for a loan early on, you'll be alright

George Graham? Bungs?

Each time you make an unsuccessful corrupt offer, or bet against your team, there is a 50 per cent chance of being caught! If you are caught in the act twice you will receive your first warning, via the newspapers – surprisingly! If you decide to carry on and are spotted after four tries, you will be sacked on the spot!



The manager looks on, furious with the referee's decisions



Select the right squad to combine with your selected formation and you'll begin to get somewhere

Looking for new talent?

The first rule in football is always keeping your chairman happy. Don't let his opinion of you fall below 10 per cent otherwise you will be sacked. Try and take your Assistant Manager's advice to help you with the running of the team, and don't skimp on training either – keep the coaching staff happy by increasing their wages and always be on the look out for others.

Youth players can be a huge investment if you bring them into the team early on in the season. Don't be put off by their low ratings – they will increase very quickly.

See the matches through so you can monitor each player's progress and make tactical changes accordingly. Avoid putting players in in-effective positions where they won't see much of the action, and don't be afraid of changing your formation early on to find the right combination. Try to steer clear of the long ball tactic – your attendance's will fall if you inflict too much of this punishment on your fans.

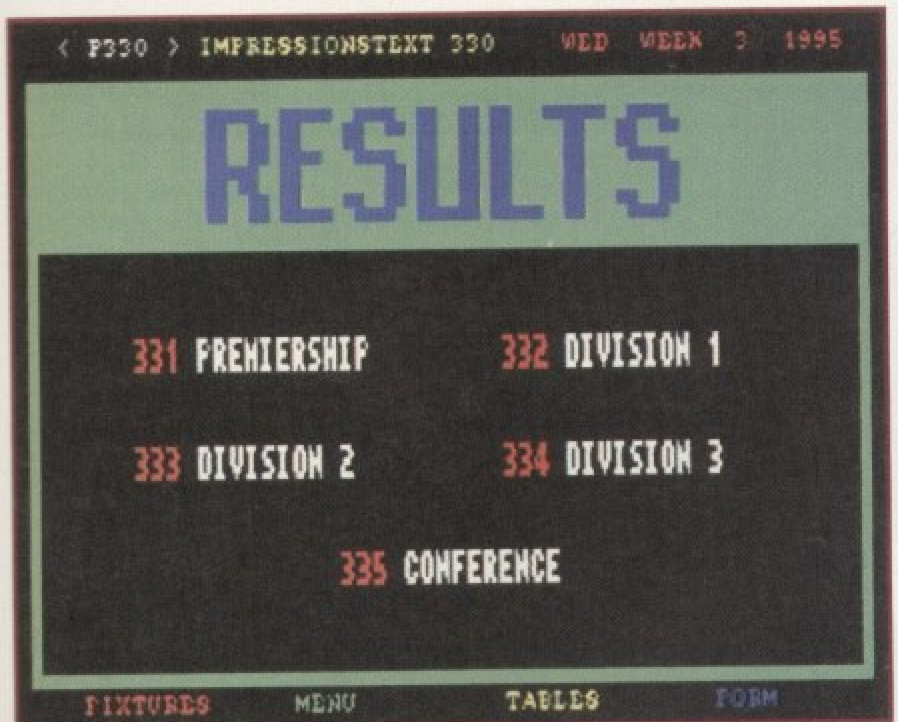
To start with, look for older players in the higher leagues – about the age of 33. These will generally be cheaper and give your side some much needed experience. Bring on players on the bench in the last ten minutes, even if you don't insist on using them, as the last minutes will give them experience and they will not become demotivated.



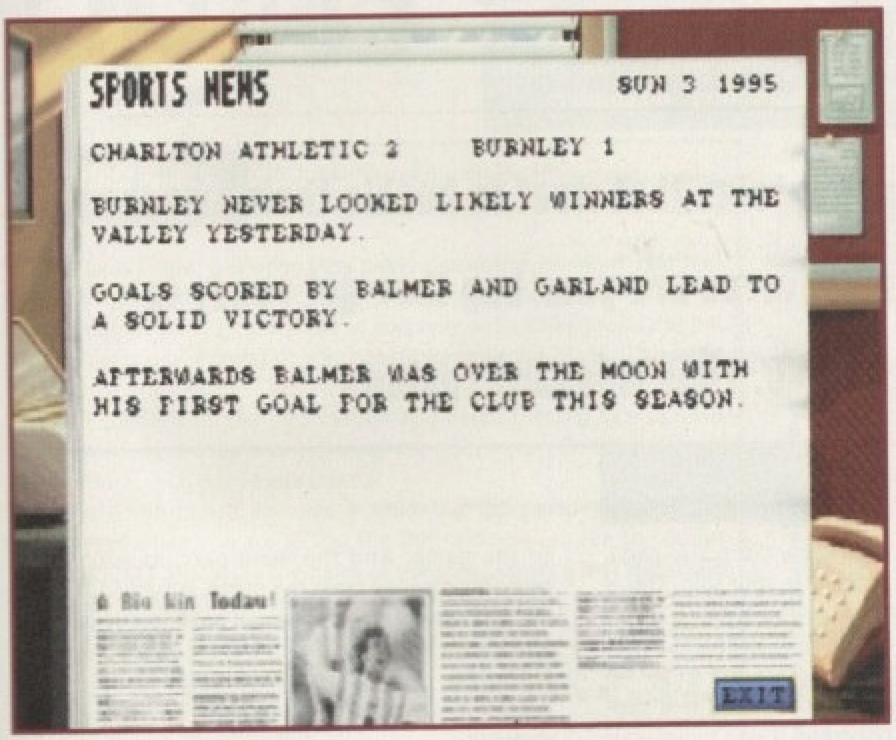
Don't forget, steer clear of the long ball game. Burnley? Passing? They can only try



Checking other scores in your league is vital to help you decide on which style to adopt for your next game



Checking other scores is vital for deciding which style to adopt for your next game



The newspaper gives inside information on how your players reacted to certain situations

Cheat. Just like Man U.

When asked for your name at the start of the game, enter 'MAKE BELIEVE' and press the following keys during a match:

+	Extra £100,000 in bank account
G	Goal attributed to last person who passes the ball
E	Penalty shoot-out
F	Gives away a foul
Esc	Quits current half, leaving the score as it stands
1	Ends the match with a 1-0 result
2	Ends the match with a 2-0 result
3	Ends the match with a 3-0 result
4	Ends the match with a 0-1 result
5	Ends the match with a 0-2 result
6	Ends the match with a 0-3 result

The Speris Legacy

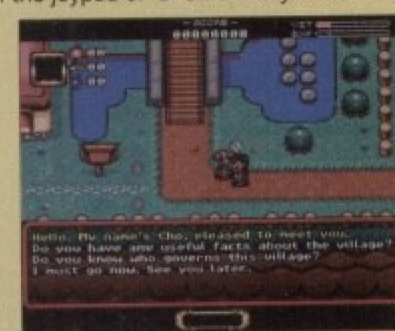
Amiga Computing Demo

Firstly, speak to the troll about the bridge. He will then instantly go into attack mode after the conversation. Go and visit Rupert the inventor (near the start point) and talk to him. Ask how to defeat the troll and he will offer you a dagger for ten gems. Go and slaughter a few ghosts and collect the ten gems needed, then return to Rupert and get the dagger. You must do this to proceed with the adventure.

Return to the troll and attack him with the dagger. Only do this when his back is facing you – his breast scale armour is too strong for the basic weapons used earlier in the game. Collect the key the troll drops and make your way to Elsrika's house (she's standing outside).

Chat to the young lady and offer her plenty of compliments – you will then find a tinder box .This will enable the bombs previously collected to be ignited – providing the tinder box is selected.

Go to the store enclosure by the corn fields – this contains three chests. Lay a bomb with either the second fire button on the joypad or 'B' on the keyboard. This will destroy the concrete pegs in your way. Open the chest and you will find a strength potion in one of them.

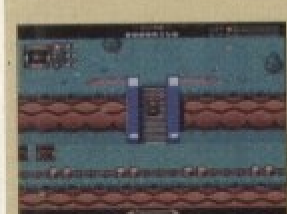


Talk to everyone you meet and get everything out of them. It could be helpful along the way

Go to the far east of the corn fields and you will find an injured young fellow named Travis. He has been attacked by one of the blue knights who have mysteriously invaded the village. Travis will ask you to find the healing elixir stored somewhere in the village. Agree, and go to the stairs by the troll's bridge and take a right turning – keep walking until you come to the once immobile stone slab. Now, push the stone to reveal a star teleport. You will be transported to a small green enclosure. Open the chest and it will contain the healing elixir needed to cure Travis.

Return to Travis and give him the elixir. He will thank you and give you a blue crystal. Go and find Guardic and Zamma who are located just after the Church's bridge. Make conversation with them and Guardic will eventually ask you for a pipe. Head towards the stairway by the troll's bridge again and take a right turn – you will notice a dwelling with two cracks in the front of the house. Walk to the back. The key you collected from the troll will automatically let you into the shop. Ask Phillis (shopkeeper) if she has a pipe for sale and she will refuse you at first, but she has a weakness for precious stones. Offer her the gem you were given by Travis and she will change her mind.

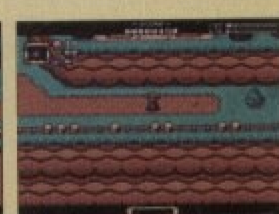
Go back to Guardic and give him the pipe. He will give you a little more information and well done – you've completed the demo.



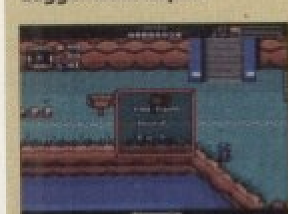
Find the troll, but make sure you've got the dagger from Rupert



Find out how to defeat the troll from friendly Rupert



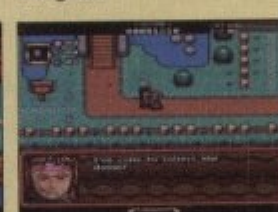
A lot of travelling is involved throughout the game



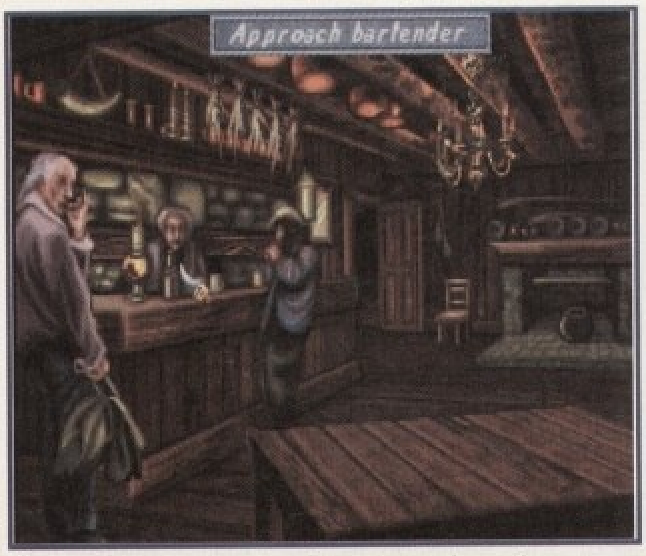
Collecting bombs can help defeat any nasties standing in the way of your quest



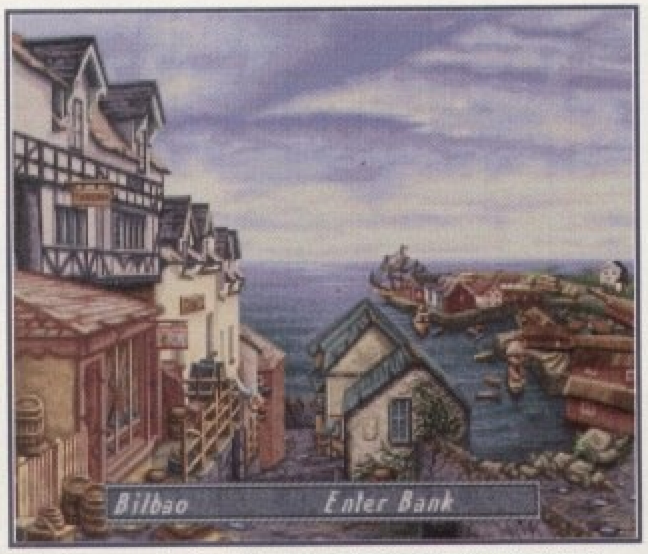
Confront the troll, making sure you've collected ten gems and have received the dagger



Rupert will give you the dagger and useful bits of information on the village

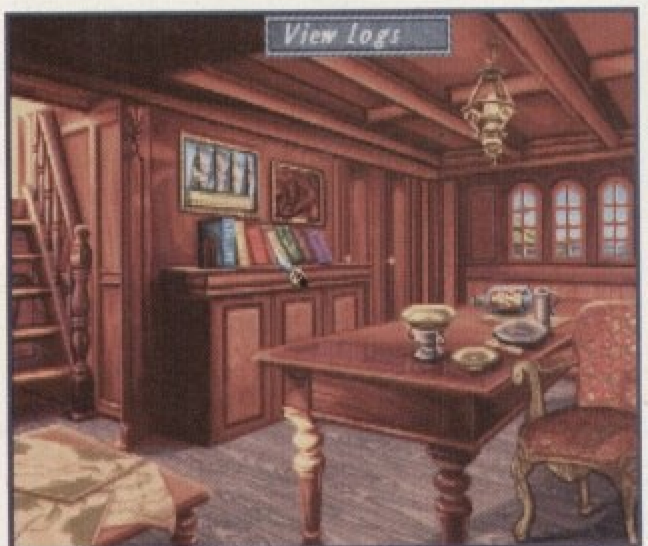


At the tavern you can gossip with the bar-tender to glean valuable info or entertain your crew to boost morale



Take the opportunity at the port to bank some money. Then if you are attacked at sea you won't lose all your gold

Publisher: Daze
Developer: Impressions
Disks: TBC
Price: £34.99
Genre: Strategy
Hard disk install: Yes
Control system: Mouse
Supports: A1200
Recommended: 68020



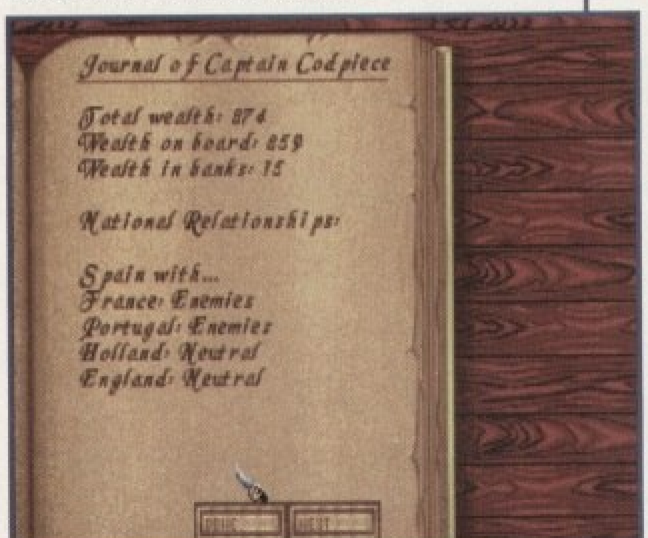
From your plush cabin you can view the log books, check rations and chart your progress

INTRODUCTION

Since the days of Elite, strategy trading games have been a very popular genre. Now Impressions, the masters of strategy, have turned their talents to the high seas and combined the usual dose of trading with a rum punch cocktail of sea shenanigans, pirating and combat.

High

Calling all Sea Captains that want to buckle their swashes. If high seas adventures are your bag then get ready to shiver your timbers. Tuna Haddock reviews



Your journal will provide valuable information – keep an eye on national relations

PLAYABILITY

Gameplay is divided into many distinctive parts. For one, you have to navigate your ship. This is done by choosing the port you wish to go to and plotting a course to it. A problem arises though, because when you place the cursor on the map you can scroll it around. This is supposed to be a plus point but if you move your mouse too far, the map jerks unexpectedly off the area you want, and even moving your cursor to the instruction panel on the same screen can result in losing your place on the map.

While on the high seas you'll have to deal with pirates and attacks from enemy ships. You do battle by firing cannons and you have a wide range of artillery at your disposal, from the small Swivel Gun or the Demi-Culverin to the Cannon. This works well and brings variety to the game. And the main part, as you've probably gleaned from the name, is trading. As you sail between ports you will have to buy certain goods and then decide where to sell your cargo for maximum profit. This, as you'd expect, is the game's strong point and is quite in-depth.

A good captain will also take care of his crew, making sure conditions are good and ensuring there will be enough supplies for the voyage. Wages will also have to be set according to morale and funds available. If you neglect these, you will find you'll have a sickly and mutinous crew on your hands. When morale gets low you can boost the rum rations or entertain them in the local tavern when you reach land.

FLASHBACK

Just recently, Black Legend brought out their sea venturing game called Voyages of Discovery. Although a very similar concept, they both have very different gameplay. Voyages uses a turn-based system and places emphasis on discovering continents and building an Empire as well as trading.

There is more to Voyages of Discovery, but High Seas Trader looks far more attractive and is probably easier to get into.



After months at sea, land comes into view and you can stock up on supplies or prepare to trade your wares

STORYLINE

There is no storyline to the game as such, more a brief background. You are cast in the role of a merchant sea captain during the 17th and 18th century, eager to prove your worth and win back your family's honour.

Your Father was a Viscount serving the Earl but when the Earl died his son took over and to cut a short story even shorter, he was a bit of a bad sort. Your Father, being an honourable chap, would not stand for it but the new Earl, being far more powerful, strips him of his wealth and title.

And now you seek to regain your family's honour by working your way up the ranks on the high seas. You start as a mere peddler and you strive for the ultimate title of Viscount. You must increase your rating in daring, honour, loyalty and nobility.

SOUND

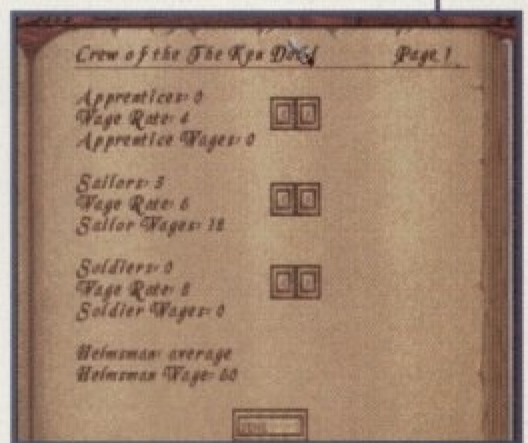
The game implements different tunes for certain areas of the game. For example, above deck you have a different tune playing to when you go to your cabin. All the music fits in with the time and atmosphere of the game, but as stand-alone tunes they're not exactly brilliant. If you particularly want to have in-game music it is adequate enough but more than likely you'll turn this off to have just the sound effects option.

But again, I'm afraid, they're not very good either. There is the occasional creak of the boat or the splosh of the anchor as you plot your course on the map, and there is also a rather dubious seagull cry throughout. I feel as though a great deal more could have been done to increase the atmosphere.

40%



As the game progresses you must try and achieve a higher level rating



Wages can be altered depending on morale and available funds

Seas Trader

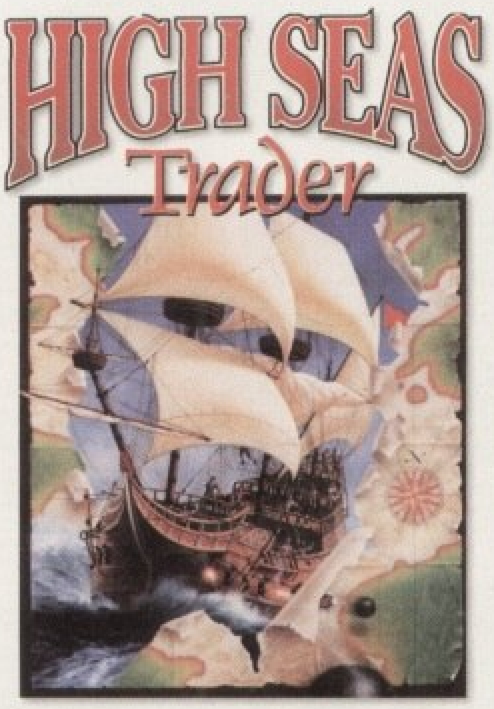
GRAPHICS

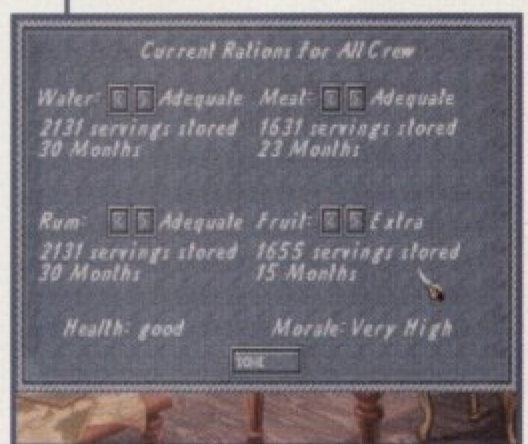
High Seas Trader has been very nicely presented, however I do feel that some of the visuals have not been exploited to the full. For example, when the crew mutiny, you only get a still screen (albeit a very nicely drawn one) of you having to walk the plank. The same goes for the market. Although you do get a well set-out table which contains all the information you need, I would like to have seen some visual representation of the goods you can trade, or just something with a bit more appeal.

The game boasts to have a 'stunning' 3D perspective. This is apparent when you are sailing the ship and you can see the ocean ahead and supposedly the helm of the ship. Again, I feel this could have been done better by maybe showing the front of the boat or having the wheel more prominent to give more of a realistic feel.

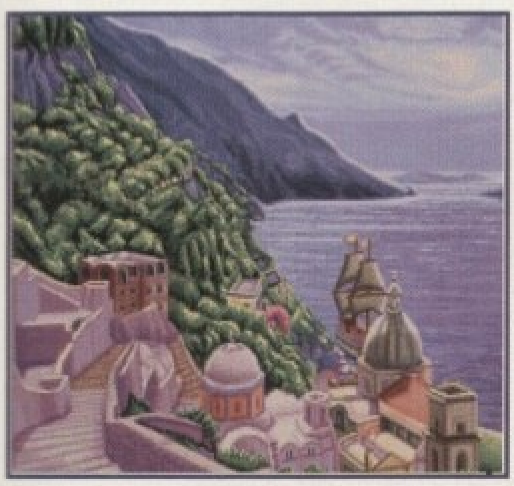
The actual effects do work well though, from the lapping of the waves to the storms with the darkened skies and bolts of lightning. Overall, the graphical style is good, althoughlimited, and the ports look nice. The inside locations such as the tavern or the cabin fit in with the period and also look very good. Although everything is very nicely drawn, I do feel that some animations would have not have gone amiss.

65%





Keep a check on rations – this affects the morale and health of your crew


There are many ports around the world you can travel to – but don't forget to buy a map!

OPINION

66%

On the whole, High Seas Trader is a competent trading simulator, with more variety than you usually get in a game of this sort. However, it's not without its drawbacks. The 3D view gives the game a certain graphical appeal, but I can't help feeling this could have been implemented more effectively. Also, the navigation of the ship is far too fiddly and as this is a major aspect of the game it does become very irritating.

There are elements that do work very well though, such as keeping your crew in order and morale high. Combat with enemy ships also adds variety. The trading aspect works well too, especially with various events affecting the economy such as wars or locusts which will alter the price of harvested crops, but by talking to the bartenders you can pick up all the news you may need.

Those heavily into trading simulations may well want to give this game a try. It is quite fun for a while but there were quite a few negative aspects which would put casual players off returning for another go.

AMIGA BRONZE AWARD

INTRODUCTION

What have the following got in common? A demon, a fortress, a quest to repel all evil from a once peaceful land, a young slip of a lad with a hidden heritage and a ridiculously large rucksack. That's right, the main ingredients to most RPGs across the world. While the hope to actually play something where some kind of imagination has been used in the plot line would be appreciated, The Tower of Souls is ultimately no different.

Presented in a 3D isometric scrolling view akin to Ultima 8 on the PC, this rehash of old ideas tells the story of an evil demon called (insert silly name) who has taken over the land (insert silly name). The ancient prophet (insert silly name) foretells the day when a young lad will make an assault against the evil one and return the country to a peaceful existence.

Funnily enough, this does indeed happen and you, the humble player, take the enviable role of playing the result of this prophecy in the shape of (insert silly name), the hero of the piece.



The alchemy kit is an excellent idea and works rather well



The inventory is a well laid out affair with your substantial backpack offering all manner of places to put your valued finds

Tower of



The quilled intro is a nice idea but goes on for far too long



Move the hero round the fortress using the virtual joystick i.e. the character moves in the direction of your pointer

In a word – simple. For the few hours I played, the main objective is to wander round the fortress turning off fountains which apparently flood the bottom levels if left on, and picking up massive amounts of herbs, spices and money. The puzzles I've experienced so far are of the 'flick the switch to open the door' variety. This area is enlarged upon, unfortunately, by the inclusion of a lock pick section and the disconnect the three bolt lock segment.

The former involves moving four different types of picklock tools over the keyhole (shown in close-up in the main panel) and moving the mouse frantically around until one of them hopefully slips into place, opening the door. The latter is shown in the main panel depicting three bars forming a lock. On the right are a number of switches that can be moved.

Click on these in a random fashion and eventually the three bars will slide all the way open, unlocking the door or turning off a particular fountain. These two ideas must have sounded great on paper but in practice are just a touch on the gimmicky and unnecessary side.

Fighting the various foe guarding the fortress is none too exciting either, whether you be using a sword or a potent spell from your substantial inventory of magic. Their habit of rising from the ground again and again from the same place even after being killed several times adds a certain monotony to the already repetitive proceedings.

There's also an auto map facility available to aid you in your wanderings round the fortress, which you'll only need once in a while.

One of the game's most original features is the alchemy kit where you can mix all nature of magic. Presented as some kind of primeval James Bond-like gadget, the unit is contained inside a metal case where basic ingredients are mixed and heated to create a spell in one of the four categories available – attack, defence, morphing and equipment spells.

Click on the make option and the magic making kit starts to cook your ingredients, then the end result plops into a test tube which is corked and ready to use. The idea is novel and works rather well.

There are a substantial amount of spells to play with, ranging from various lethal projectiles such as acid, fireballs and lightning to the more oddball magi such as creating an illusion to fool your enemies, morphing into a rat to outwit the enemy or maybe slipping into previously unreachable places. It has to be said that out of the whole game, the magic side is by far the strongest.

80%

The control panel – from left to right, the compass, the inventory, what you're holding and how healthy you are, and finally the all-important spell book



GRAPHICS



There's real professional quality to the graphics on first viewing – the fancy but overlong intro depicts a quilled pen writing out the game story on a parchment, with illustrations of the key events fading up into view at the top. The inventory screen looks equally as impressive, with a rather meaty looking rucksack and the most bizarre and inventive looking magic tool kit I've ever seen.

While lacking the excellent standard of graphics seen in Heimdall 2 or, to a lesser extent, Dragon Stone, the main in-game visuals are well-defined on the whole, and the scrolling, while a touch slow, works at a decent enough rate as to not prove distracting. The scenery, as far as I've seen it, is relatively dull – lots of fortress walls in various tones and colours become rather repetitive after a while.

Another annoying aspect is the sometimes indistinguishable objects that can be picked up – there's no text saying what something is and you've no idea what they are.

As with the plot, the main problem with the graphics is that I've seen this genre style again and again in other games – it would be refreshing to see visuals that smack of something more pictorially inventive like some of the scenes in Heimdall 2. The dank dungeon walls, the spikes in the floor, the hooded figures throwing fireballs – all look the part but what a dull part to play.

68%

Souls

Hackneyed RPGs are becoming as commonplace as long-in-the-tooth platformers. Adam Phillips reviews a game that's determined not to change the trend

FLASHBACK

If you want to indulge yourself in a rich story with involving gameplay then look no further than Core Design's Heimdall 2. Featuring cartoon-like graphics packed with character, a variety of differing puzzle types and numerous places to visit such as huts, astral planes and castles on different islands, this a rather successful attempt at the RPG genre.

- Publisher: Black Legend
- Developer: Parys Technografx
- Disks: 2
- Price: £29.99
- Genre: RPG
- Hard disk install: Yes
- Control: Mouse
- Support: Amiga 1200 with 2Mb of RAM
- Recommended: 68020 upwards

SOUND

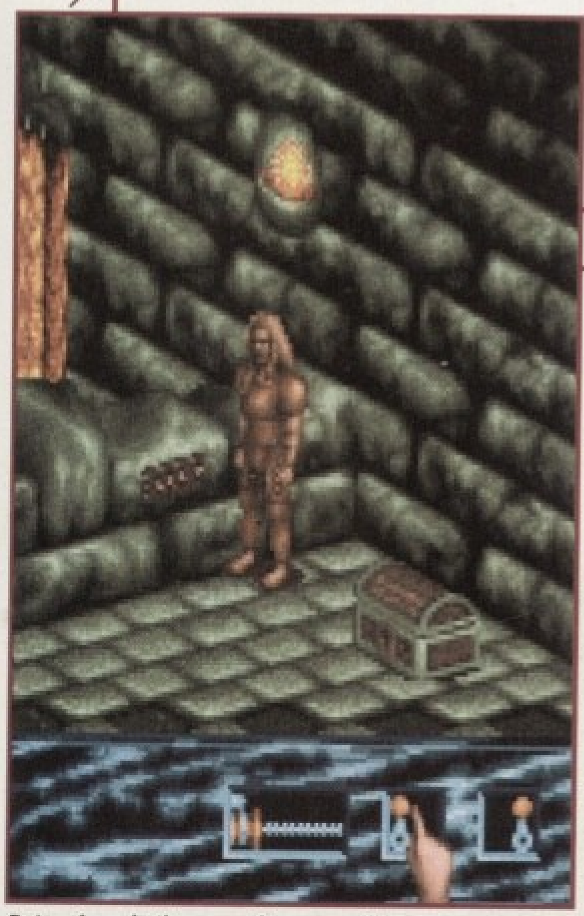
The main bulk of the music is string-based, supposedly epic, but unfortunately the synth sound used is a just a touch on the naff side. Imagine the music used to accompany a Conan film, with everybody's hero, Arnie, riding off to face his quest – big, butch, brave and tacky.

The in-game sounds are spot effect-based, with musical accompaniment, but the tune is a little basic although effective.

Again, though, there is a problem – while we hear the rasping of flames, the footfalls of our hero, the sliding of locks as they open, and more, the makers have unfortunately pitched the footsteps at a much lower volume level than all the other sound effects.

So putting the volume up to clearly hear the hero's footfalls as they clank down on the stone floor results in a sudden explosion of loud sound when anything else happens. Annoying.

55%



Determine whether your character will be more of a mage or a warrior using the slider at the bottom of the 'rack' of statistics



These fountains need to be turned off to stop the lower levels from flooding later on in the game

OPINION

57%

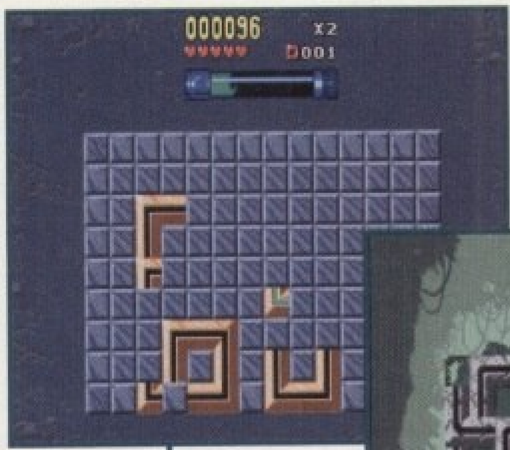
I can't help but feel it's a cop out to say that this kind of game will suit the tastes of the professional role-players among you. Perhaps there are people out there who will glean some excitement from this package and be held in its grip for hours, but for the rest of us with some semblance of a life, this is an average, uninspiring game with the only temporary relief being the magic making.

To have succeeded, Tower of Souls needed more thinking man's puzzles and perhaps some kind of interaction. Indeed, perhaps all this is included later on but after spending a few hours on it, I gave up out of boredom and frustration.

There's obviously some clever programming talent here but the game designer needs to rethink what makes an RPG interesting, gripping, atmospheric and, above all, imaginative: After all, that's what fantasy is all about – escapism. Until this happens, any further releases or sequels along a similar line will end up on the Most-Not-Wanted list. And you need two meg to play Tower of Souls.

INTRODUCTION

Either you love puzzlers or you don't. I'm afraid I was in the latter category until I played X-It a couple of months ago. It was too late to salvage my Rubik's Cube by then though, so I waited with baited breath for another puzzler to come along that would take my fancy. And it has – sort of! It's Audiogenic's latest offering which takes the form of building loops. It's one of those games I shouldn't like for all the reasons I'll go into in a minute, but for some weird reason it's rather playable.



As the blocks fall on to the grid you create the loops, see?



The backdrops are hardly inspiring and could have had far more to them

Super Loopz

Being rather loopy herself, Tina Hackett takes a look at Audiogenic's latest puzzler that will drive even those with saintly patience completely round the twist

Publisher: Audiogenic
Developer: In-House
Disks: 1
Price: £15.99
Genre: Puzzler
Hard Disk Install: Yes
Control: Joystick/Pad/Mouse
Supports: A1200/CD32
Recommended: 68020/CD32

PLAYABILITY

Basically, the idea behind Super Loopz is to join the different blocks that fall onto the grid to create continuous loops. There is a time limit to put down each piece, and if you can't place it you lose a life.

The game can be played by using a one or two-button joystick, a CD32 controller or a mouse. The joystick seems to be the easiest, and when the piece drops onto the playfield you can rotate the shape by pressing fire and right, then when it is in the position you want, press fire and left. However, once it is in position it is permanent. The bigger the loop you can make, the more points you'll get.

Super Loopz has a variety of different sections to play. The arcade game can be played by one or two players, and you must make ten loops to progress on to the next level. Three bonus games can be accessed by completing different missions.

You can also play a challenge game which means you can pit your wits against an opponent. You each get a separate grid and the winner is the one who scores the most points.

There is a puzzle option too which involves being shown a complete loop with some of the pieces then dropping off one by one. You have to watch carefully because you have to remember where they go and replace them.



On one of the bonuses the blocks don't actually disappear which makes life very tricky

SOUND

The tunes are the usual lively in-game music you'd expect to find. When you're playing the puzzles you'll get a range of sound effects when you make a loop, from a crowd cheering to a strange monkey sound. However, the accompanying tunes are rather grating and be warned – supply ear plugs to anyone within a mile radius of your computer. My advice: Turn the volume down and hum.

35%

GRAPHICS

Visually, the game is certainly nothing to get excited about. But it is a puzzler after all – I mean look at Tetris, nobody would describe that as graphically stunning, I'm sure.

The screens in Super Loopz contain a grid, falling blocks that make the loops, and a variety of backgrounds. Unfortunately, the backgrounds aren't all that stunning, and something a bit more imaginative would have made a hell of a difference.

They vary (?) from bonus backgrounds covered in fruit to a tree housing animated monkeys that pop out whenever you complete a loop. Hmm, inspired.

30%

OPINION

56%

Okay, it's certainly not the best puzzler in the world and granted, there are many features missing that would have made this a good title. *But* for some strange reason I found myself sneaking back to the computer for just one more go. I don't know why, because it certainly didn't have a big incentive to strive for, the graphics are pretty bland, and the sound is nothing special.

I think it could have had a lot more to it, especially with an objective or fancy graphics, but the puzzle element does seem to work quite well and is quite addictive as far as it goes.

It does worry me though that the game is A1200 and CD32 only. "Why?" is my only thought on that matter. Rumour has it an A500 version will be released which is the original Loopz, only the graphics aren't as good – I'll refrain from comment on that, I think!

If you like puzzlers then this could be worth checking out. Trust me, it is quite fun, for a while anyway, and it is only £15.

AMIGA COMPUTING BRONZE AWARD

OPTONICA

INFO NEXUS NEW!

£29.95

InfoNexus is a sophisticated file management system with integrated multimedia and network support. An ideal replacement for both workbench and CLI users InfoNexus features a full on line help system. As well as having the ability to move, copy, delete, rename files. InfoNexus allows you to view/hear/launch just about any file. InfoNexus is simply the best File/Data manager on the market today!

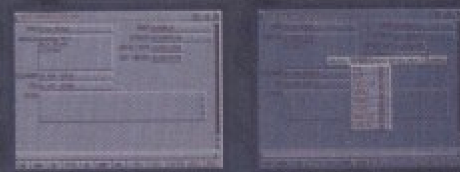


ALL AMIGAS 1 MEG RAM MIN

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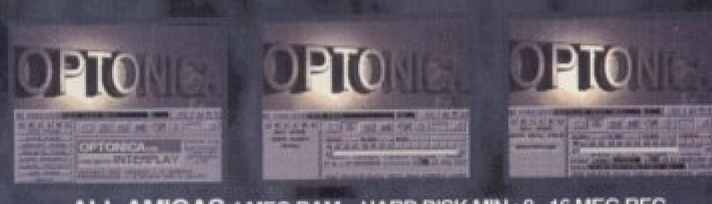
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You'll meet some very strange characters during the course of the game



Hallucinogenic worms in tequila. Hmm, a very weird pastime



Animations will enhance the game, like this imaginative drowning scene



The inventory screens are tucked neatly away at the bottom



Rescue the sacred book from the malevolent horsemen

system analysis

Limbo



Tina Hackett, your devil in disguise, casts her soul into Limbo forever to take a look at what certainly promises to be one helluva game from new developers Tri-Logik Studios

The recent ECTS was a platform for quite a few new Amiga releases. One such title could be found on the Rasputin stand and at first glance it looked to be your rather average arcade adventure fare.

Called Limbo of the Lost, it's a first project for Kent-based developers, Tri-Logik Studios. When I first saw the game, I must admit I wasn't particularly gobsmacked. But having now seen the previewable version demonstrated fully, I am rather optimistic for the future of this up-and-coming team.

It's an adventure game that has a passing resemblance to Another World in its graphical style and approach. And what does look particularly appealing about the title is its historical storyline. Based on the factual events of the Mary Celeste, it uses this historical background and the mystery surrounding it to create a highly atmospheric game.

As no-one knows what happened to the crew of the ship, they've created one particular fantasy-based ending that makes an excellent storyline for the game.

An unusual and original touch will be the addition of a video which will accompany the game and provide the following plot: The Mary Celeste is en-route to Italy when a strange mist engulfs the ship, sending the navigation into turmoil. Eventually, the ship runs aground on an island that doesn't appear on any sea chart.

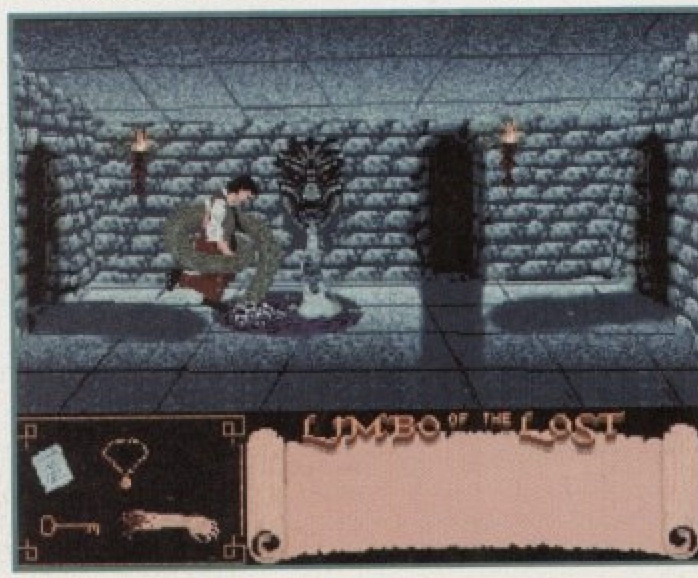
Briggs, the Captain, sends a party ashore, but when they don't return he sends another group to look for them. Again, they don't return. A storm brews up and he gives orders to abandon ship. He then sets off himself to see what's happened to his crew, and stumbles across one of the shipmates lying in the undergrowth, barely alive but able to recount the previous days events. He tells of how they came across an ancient temple, and finding a beautiful book written in a strange language they agree to take it back to the ship.

But as they lift the book, from a dark opening in the temple four figures emerge mounted on horseback, and they attack with a force that seems to melt the flesh off their bones. They tussle for the book one of them is holding and the crew flee in terror, managing to only grasp on to one page from the book.

After telling the tale he dies and Briggs continues his search. He comes across the temple and cautiously goes inside. Hidden from their view, he hears the horsemen tell his shipmate, Johnson, that the book is God's book of creation and having been moved from the sacred altar by a mortal, they are now able to use it to reverse the creation of earth.

They then kill Johnson and ride away. Briggs ventures further and sees a ghostly apparition of Johnson who tells him the horsemen do not know the page is missing and without it they cannot perform their evil deed. He begs Briggs to find the book and free their souls from Limbo, where they are condemned to spend eternity as slaves. Briggs steps into the portal and the game begins.

You play the unseen guardian to Captain Briggs, directing all the action via a point



Watch out for hidden traps that will lure you to your doom

The Mary Celeste

The Mary Celeste is well renowned for being a very unlucky ship – some may even say jinxed! Built in 1860, disaster struck only a year later. Originally christened 'Amazon', she set sail, and only a short time afterwards her skipper fell ill and died. John Nutting Parker assumed command but the ship then ran into a fishing weir causing damage to the hull, had to go to the shipyards for repair and while she was there a fire broke out.

The bad luck didn't end there, though. On her first Atlantic crossing she collided with a brig and sunk it. After the repairs she returned to America where she ran aground off Cow Bay, Nova Scotia.

It's not all that clear as to what happened after she was yet again repaired, although it seems she was passed between a variety of owners, none of which did well out of her – some even went bankrupt. Eventually, a consortium of New York ship owners took ownership of her and as an improved and larger vessel, she was renamed Mary Celeste. The next voyage was the greatest mystery of all. In 1872, under Captain Benjamin Spooner Briggs, she set sail with a full crew including the Captain's wife and one of their children.

Nothing was seen of them after this and the ship was later discovered by the crew of the Dei Gratia who found the Mary Celeste abandoned. The vessel was still seaworthy though, and missing was the chronometer, sextant, bill of lading and navigation book. Abandoning ship is a desperate measure and as one of the Dei Gratia's crew remarked: "The Mary Celeste was in a fit enough state to sail around the world. So why was she abandoned?"



The game is littered with rather gory tongue-in-cheek touches that will add humour

of the Lost

'n' click mouse system. The inventory and all the information you will need will be kept at the bottom of the screen so as not to interfere with the main play area, and the mouse icon can be changed according to the action you want to carry out.

There are many weird and wonderful characters you'll come across in Limbo of the Lost. Some may be good, others bad, and you'll have to find out about those that will help you on your quest and those that will just hinder – or even kill you. The main character, Briggs, will also talk to you, explaining an object you may want to know about. He may not agree with you though, and could nag you if you take too long over a decision.

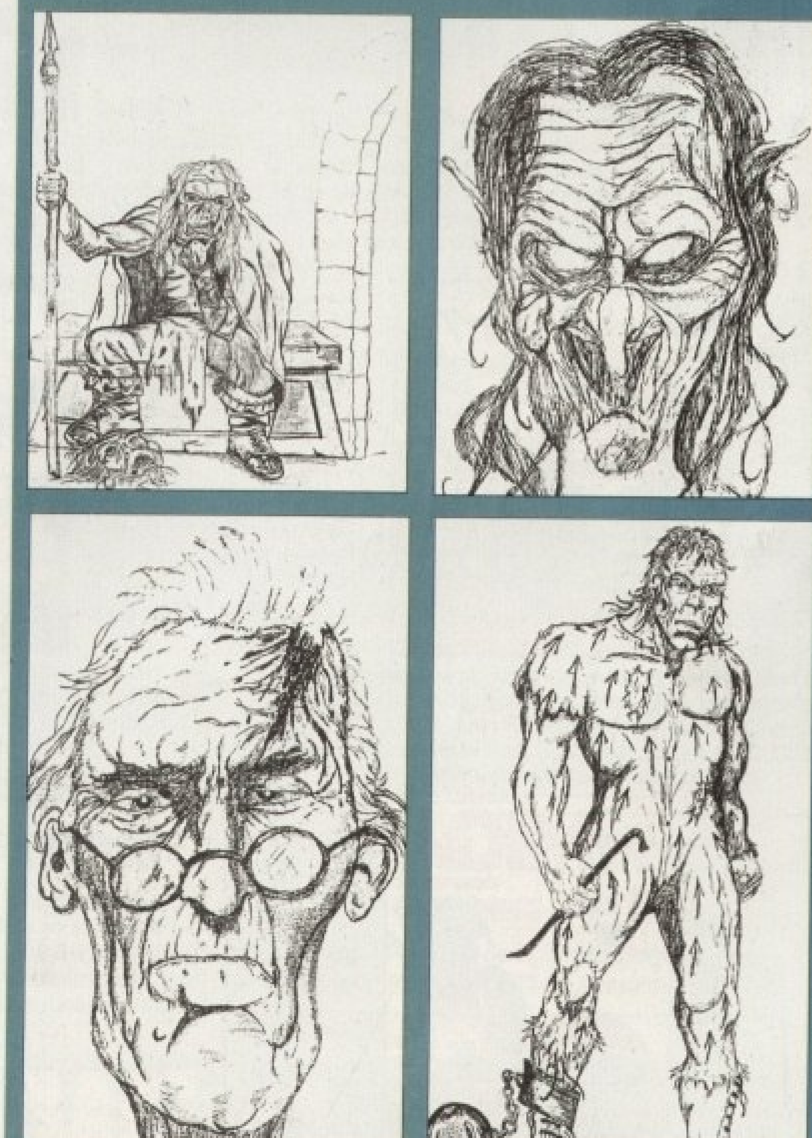
A range of animations will be added to the game. There are quite a few nasty ways to die and these are accompanied with some rather grisly scenes such as a drowning! Characters will also be animated and fully-interactive environments will ensure some thorough gameplay.

Sound effects are rather promising at this stage too. Speech will be used throughout and all the characters will have different voices such as deep sinister speech for the four horsemen or a slow, demented drawl for one of the monsters. So far, all of these have been well implemented and a good range of realistic sound effects will provide atmosphere.

The final version won't be ready until October but we'll be bringing you updates on what looks like being an original and atmospheric adventure.



A rather worried Captain Briggs. You play his unseen aide



Steven Bovis, responsible for the graphics, has created some very imaginative characters for the game, including Cranny the Cook and Grunger the Gate Keeper

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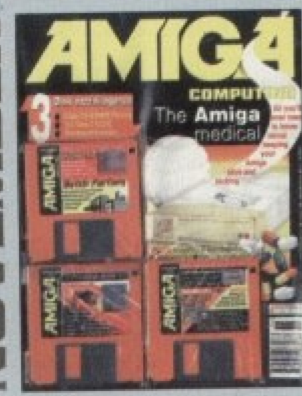
An exclusive preview of the new stand-alone Lightwave PAL, plus all its essential add-ons. A first look at PageStream 3.0. Retina III, MainActor and a DIY guide to building a home studio.
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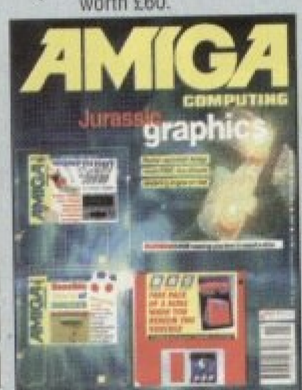
We look at the freelance graphics market to see how you can make a bob or two with your creativity. Plus: Forge, Pyromania, Picasso and Pablo.
ON 2 DISKS: 3D textures for 2D an 3D graphics applications. Plus HamLabPlus.

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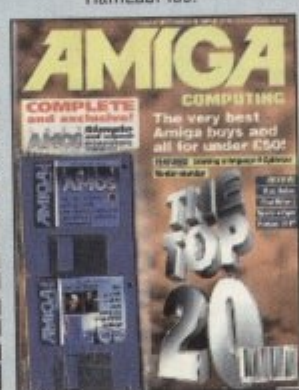
We reveal all you need to know about Amiga maintenance. Plus reviews of Warp Engine, Image F/X 2 and 3D CD's.
ON 3 DISKS: Demos of Batch Factory, Edge, Top Gear 2 and a host of shareware titles to dip into.

DECEMBER



AC test drives the Raptor accelerator and talks to the people who use it to create their commercial graphics. Plus reviews of World Construction Set, Wavemaker, TurboCalc v2 and Bertie Bunny!
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CHRISTMAS



Want a list of the top 20 best Amiga buys? Look no further than our countdown of the cream of products for your machine. Plus a monitor roundup, Final Writer 3, VLab Motion and more reviewed.
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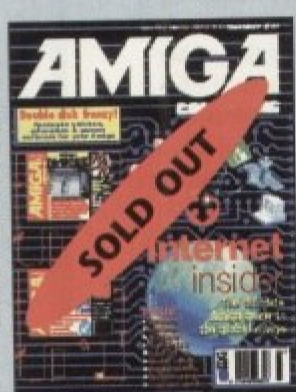
The Video toaster finally arrives on the shores of Britain with the help of the Passport 4000. Also take a look at Imagine 3.1, Wordworth 3.1 and see hidden 3D pictures with StereoCAD.
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FEBRUARY



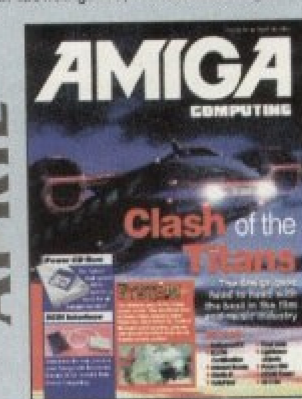
We go behind the scenes of Aardman Animations, those talented folk responsible for The Wrong Trousers and a rather large quantity of TV commercials – most of which have been given a helping hand by the Amiga. Plus reviews of Termite, Photogenics and Gamesmith.
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MARCH



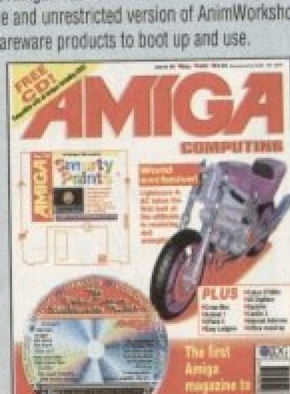
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ON 2 DISKS: DirWork, 10 out of 10 Maths Statistics demo and 10 out of 10 Driving Test demo as well!

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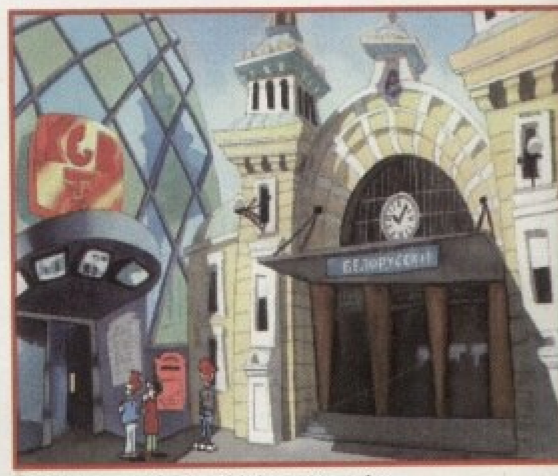
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The introduction anim tells the story of the Russian cultural revolution since the Cold War ended. In other words, the appearance of scantily clad women, cadillac cars and beef burgers



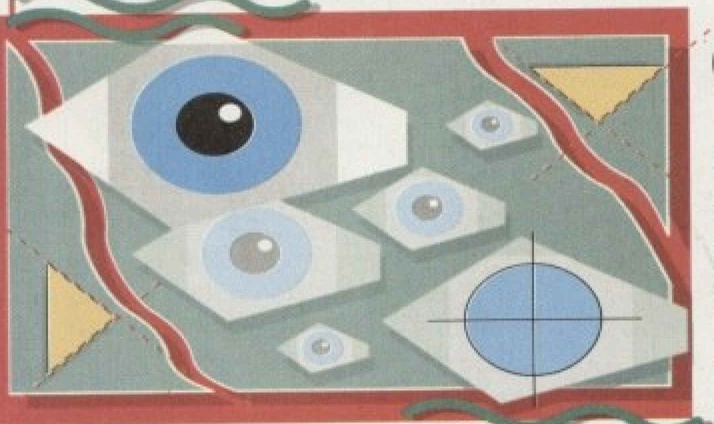
The control panel – click and hold on the right-hand mouse button to bring up the iconified list of actions and inventory



Visit Moscow Station (right next to the KGB television Studios where daytime quizzes are now shot) and catch the Orient Express

system preview

Big Red



In the aftermath of collapsed communism, Russia has become virgin territory for Western goods. Core Design go one step further and base a game round the new democracy. Adam Phillips previews

Let's get one thing clear from this point onwards – stereotypes in computer games are a fad that are never going to go out of fashion. Japanese with their cameras, the Irish with their potatoes, and now the Russians with their technologically-backward attitudes and a naiveté of Western culture.

The backdrop for the rather handsome looking Big Red Adventure is Moscow after the initial wave of capitalism has swept over it. The Kremlin palace has been turned into a museum housing Russia's greatest treasures. Among the pickings is the coveted crown of Tsar Ivan the Horrible covered in a variety of jewels, pearls and other assorted goodies that are worth a fortune.

For some reason, to begin with, you take on the role of a foreign tourist turned criminal who wants to steal the crown. Doug Nuts, techno-nerd extraordinaire who has a penchant for criminality, is the first character to be put in your control in the room of a hotel suite. The game itself is split into four different sections – for three of these you play three differing characters including our Doug.

Further on in the game you take on the role of Dino Fagoli, an ex-boxer of Italian origin (let's get those stereotypes really cooking) who's described as an honest and decent kind of guy who unfortunately (surprise, surprise) is as thick as black strap molasses (thick, black treacle to you, sunshine).

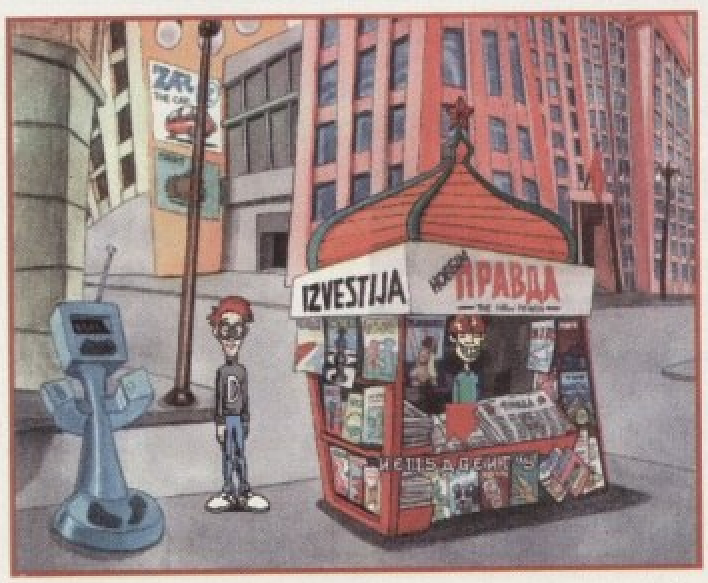
The third and final personality is Donna Fatale whose past is somewhat sordid – apparently. Forever trying to cover up the indiscretions of a mis-spent youth, she often finds herself on the receiving end of



The Big Red Adventure is made up of 100 different locations to explore your way through. From the sunny shades of Gorky Park to the icy wastelands of Zerograd



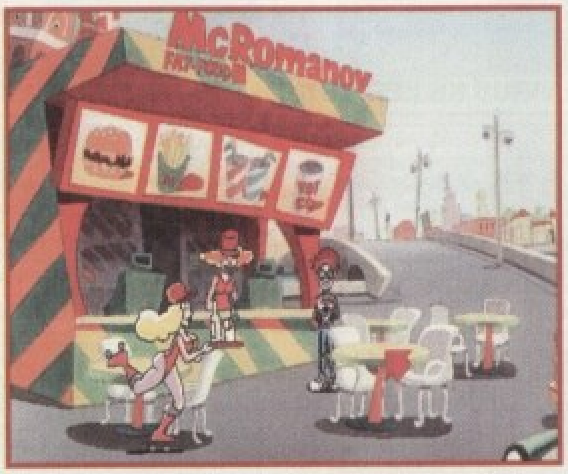
The hotel room where you begin. Move the red pointer over an object you want to use, open or examine



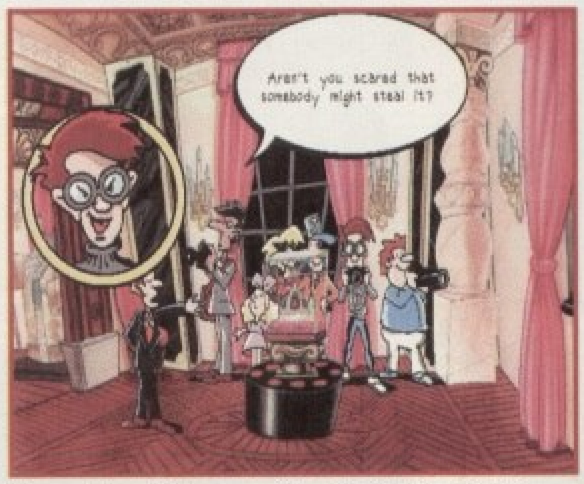
Newsagents have hit the streets of Moscow big time! For all sad people reading, that copy of PlayBoris dangling enticingly from its hook can be bought – that's democracy for you



Gorky Park – a location wrapped in mystery and cloak 'n' dagger normally, but now home to kid with a Lenenintendo handheld console. Oh, culture!



McRomanov – the Russian Macdonalds. Choose from a wide selection of fast food snacks but watch out for the roller-skating waitress



The much-heralded crown of Ivan the Terrible which is kept in the Kremlin and has now been turned into a tourist attraction. All speech is shown in cartoon-style speech bubbles and close-ups of the characters

Adventure



At some point in the game, you're going to need that Lenintendo handheld the kids got. Why not swap that super-doopah PC in your inventory with him?

ruthless blackmail threats. The fourth and last section of the game is where all the loose ends are brought together to an exciting denouement. I can hardly wait.

It transpires during the animated introduction to the game that certain factions of old Russia are none too happy in the way Western culture has affected the once great motherland. Lenin-loving crusties want to get things back the way they were before the invasion of Big Macs, computer games and rock music, and they intend to go to any measure to achieve this.

LOOK-ALIKE

Heading this cast of evil-looking Stazi stormtroopers is a Lenin-like figure who looks like a university lecturer after an AA meeting. Obviously, at some point, you're going to have to put a stop to their dastardly plans through the use of cunning, good looks and luck.

Using the conventional point 'n' click method of moving the character around, objects can be picked up and used, characters talked to, and doors opened. Like most games of this ilk, puzzles come in the form of using the objects in the right place and talking to Moscow's denizens in a quest for more information.

One of the first problems the player stumbles across is how to get on the daily quiz show held at KGB Studios. First of all, watch the programme on the television which will tell you to buy the Moscow TV Times to get hold of a ticket. The paper can be bought from the newsagents outside the hotel.

Inside is a ticket with three questions on that'll each need answering before you can send it off to be entered into the draw of lucky audience winners. How you get the answers leads to separate puzzles and quests, one of which involves getting a queuing Russian to buy caviar for you in return for a roll of toilet paper.

CONUNDRUMS

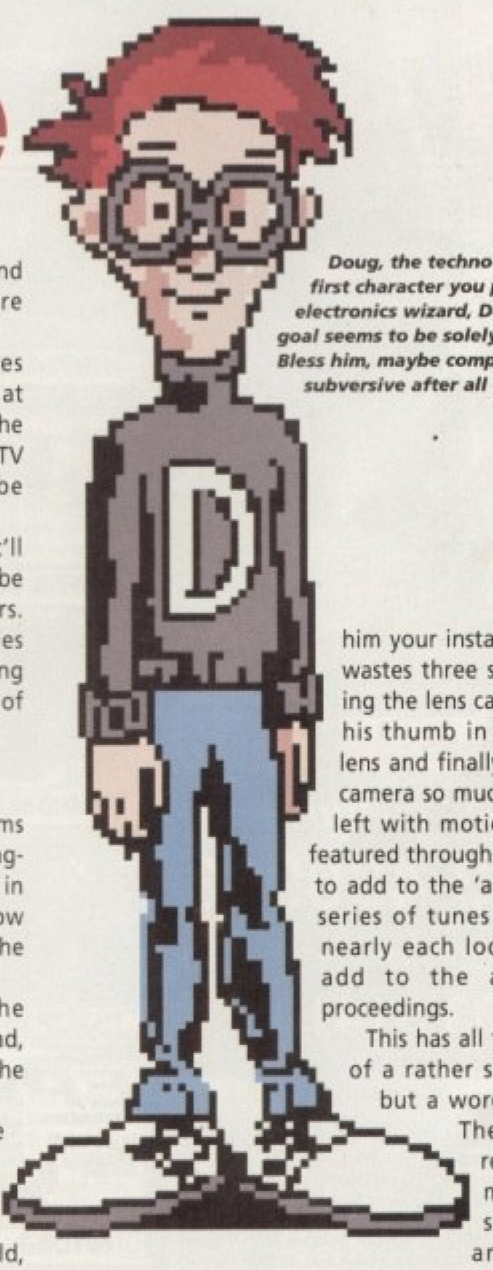
From what I've played, the various conundrums thrown up by the game are intelligent and challenging, but not so overtly difficult as to stop you dead in your tracks for several weeks. But who knows how hard they get on the later sections? Find out in the full System review in the next couple of months.

Along your travels you're whipped along the streets of Moscow, across the icy steppes of Zerograd, taken on a ride on the Orient Express and enter the deep red heart of communism.

One of the game's most enticing aspects is the rather sumptuous graphics that have a real professional sheen to them. The backgrounds have been painted and put on the screen in 256 colours, with the colourful, if clichéd, characters presented in bold, vivid colours. There's no doubt that a considerable amount of time has been taken on aspects of the visual presentation, and the graphics match those seen in most Sierra titles such as the later King's Quest games.

With over 100 locations to trawl through, varying from Moscow station and KGB TV studios to McRomanovs (Macdonalds anyone?) and Gorky Park, the player can interact with 50 characters along their travels. Most of these characters are clichéd but well drawn and fill their parts effectively.

Take the Japanese photographer who doesn't know how to use his top-of-the-range camera – give him your instamatic and he wastes three shots by leaving the lens cap on, getting his thumb in front of the lens and finally shaking the camera so much that you're left with motion blur. Also featured throughout the game to add to the 'ambience' is a series of tunes tailored for nearly each location which add to the atmospheric proceedings.



Doug, the techno-nerd, is the first character you play. An electronics wizard, Doug's main goal seems to be solely criminal. Bless him, maybe computers are subversive after all

This has all the hallmarks of a rather special game, but a word of caution. The PC version, released a few months ago, suffered from an awkward control system where it was difficult to move your character to an exact position, and the map didn't make much sense – lapping back on itself when you were going in a completely different direction, and the main character sometimes simply ignoring where you wanted to go.

If Core Design has cleared up these hiccups, Amiga users everywhere could be in for a refreshing treat in an original gaming environment (apart from those comic book characters). We'll be able to look over our shoulders at Sierra and LucasArts and realise that the Amiga community doesn't need them anymore anyway. Hopefully.


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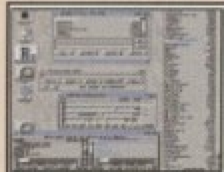

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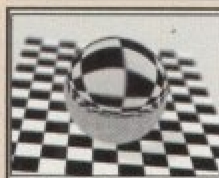
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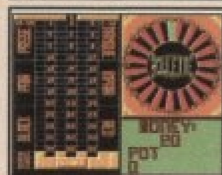


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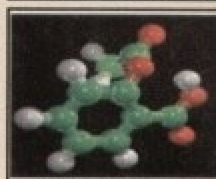
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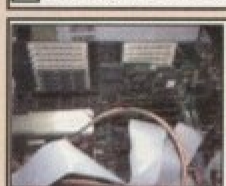
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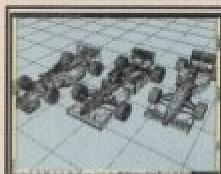
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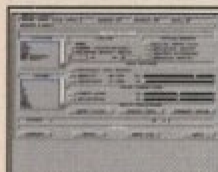
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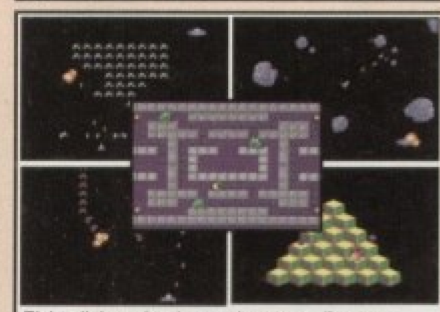
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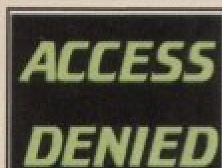

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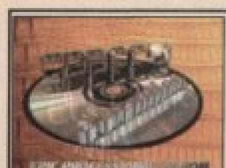
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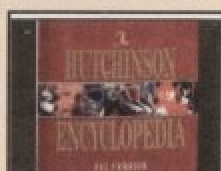


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UFO –

Andy Maddock becomes intrepid adventurer as he goes in search of those infamous little green men and the answers to a million UFO questions

INTRODUCTION

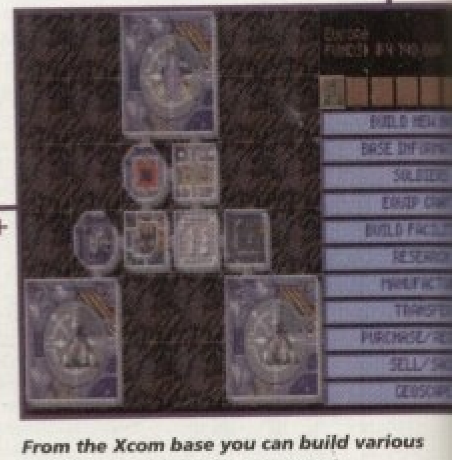
UFO actually stands for Unidentified Flying Object, as most people already know. They tend to associate them with triangular space things that whizz through the sky at millions of miles per hour. The theory is Aliens. That's the explanation!

Many years have gone by while scientists have studied all the evidence, yet there's still no concrete proof that these little green men do or don't exist.

If they do, they obviously don't seem to be planning to attack us or wipe us out in the future. They just seem content researching us. Some people claimed to have been examined or monitored by a weird method! Is it true? Who knows? What would happen if they did find a reason to attack us. What would we do? The thought is terrifying. Well, sort of.

Recently, over the South Manchester area, there have been many sightings of these unknown objects whizzing over the Pennines. Are there other life forms living in new galaxies using technology far more advanced than anything we've ever dreamt of?

Aliens, supposedly, have access to small, shiny vehicles that can travel in depths of any galaxy they please and never get pulled up for speeding. And what do we have... the Amiga 500?



From the Xcom base you can build various facilities to aid you in your quest

STORYLINE

The idea is to take control of XCom which is a secret organisation planning to wipe out invading UFOs – who, incidentally, have decided to attack. The only way of defeating them is to shoot the UFOs down to the ground and search the wreckage for technology to use against them. This is where the strategy aspect comes in.

Deciding on what weapons to research and the type of armoury for your soldiers is, unfortunately, your first worry. You then have to land on their territory and defeat them. Only by constant research will your army grow large enough and strong enough to enable you to even think of attacking the aliens.

Once you defeat them you will learn more about them and their way of thinking. After a while you may be able to predict their moves and form different strategies.

A number of important decisions have to be made to prevent the UFOs attacking your base. Once you have made ground and established yourself as a leading base, you can extend your community and set up plant elsewhere within the world. To do this you must send out your jets to patrol the vicinity to check for unwanted guests – disposing of them immediately.

Sending out various Interceptor jets to shoot them down is a good thing to do to make an area clear. You can then think about sending out a passenger ship carrying all your soldiers and ammo. This is very dangerous as you have no real knowledge of the UFO's crew or cargo. It's your job to organise your troops safely and control them through the exploration stages, and this is where the action begins.





Plan your battle strategy carefully and collect UFO technology to research

SOUND

Atmospheric tunes are usually the norm for strategy games, and UFO is no exception. It has its fair share of eerie tunes blending in well, suiting the action and graphics, but the effects are fairly limited to the odd bleep, resembling gun fire. There isn't much to write home about in particular because the style of the game is progressive rather than action all the way.

The action scenes could have been spiced up with some speech or sampled aircraft noises, which would have added to the realism. However, as it stands, the music and sound effects are really both adequate because you don't really take much notice of them. Actually, you may as well make your own sounds. Eeeeaaaawww! Chaaa! Chaaa... erm, maybe not.

59%

GRAPHICS

The graphics are probably the best part of the game. They are chunky yet very detailed. However, the only let-down are the actual combat sequences on the ground, which are very bland and could easily have been improved. The world map is very well drawn and the actual stills of faces, equipment and transporters are very good. Overall, the graphics are clear and adequate.

Obviously, the main factor for a strategy game is to be detailed and playable rather than very presentable. The graphics and sound are much of a bonus if you're going to be constantly engrossed in your tactics and strategies – the presentation will not play too big a part in your initial reaction.

The animation of the game is slightly different, and becomes very jerky during the ground battle scenes. The limited amount of frames of animation look unfinished and very unprofessional, which make the battle scenes, in particular, very sluggish and even clumsy. The control system then becomes awkward and results in a game which hosts a whole load of detail being disappointingly let down by slightly minor, although very poor finishing touches.

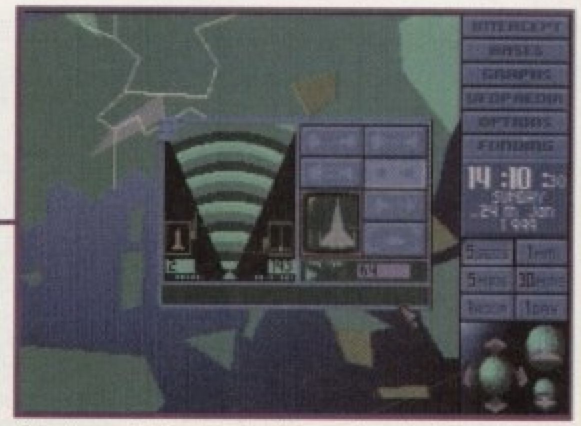
74%



Protecting your base is the easy part. Intercepting the UFOs and shooting them down requires skill



Take a look at all the technology you have collected in recent missions



Select your battle plan for intercepting the UFO. Plan a cautious attack before leaping in with missiles

Enemy Unknown

AMIGA SILVER AWARD

ADDITIONAL INFO

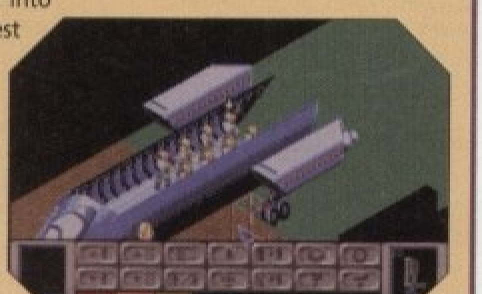
UFO is now available to all 500 owners. After being released on the 1200 and CD32, the 500 version follows suit. Compared to the superior versions, it's basically another run-of-the-mill 500 version – vastly slower, and generally a 500 feel to it. If you've never played the other versions then you haven't really got anything to compare it to.

Collated to other similar strategy games with a twist of adventure, it doesn't really touch them. The two that stand out from the rest are Space Crusade and more recently, K240, which are both incredibly in-depth and contain livelier action sequences.

OPINION 67%

The menus are well implemented and easy to use, although the lack of on-screen information takes a toll at important parts of the game – constantly looking at the manual to get started becomes very boring, very quickly.

Now for the 500 version itself. I'm afraid it's not as fast as I'd hoped. They've tried to keep the disk swapping down to a bear minimum and they've succeeded, but it's the accessing of the disks that now becomes the big wait. More or less every icon clicked on needs a few seconds of access, and if you click on the wrong icon you'll have to wait to get back into the game. Through this, I lost interest very quickly.



I must admit, the amount of detail is fantastic and it's certainly one of the most in-depth games I've played yet. It contains all sorts of information on guns, ships, ammunition and troops, and is a real statistic buff's heaven. Unfortunately, this isn't me.

If you enjoy strategy/battle games with a hint of adventure then you might as well invest in a hard disk. Most games of this genre appear in the box accompanied by about five to ten disks, and the last thing you want to do is swap them around every few minutes. It's certainly a worthy purchase for existing 500 owners who want to inject a little oomph and snazz into their grey-haired machine, but be careful non-hard disk owners!

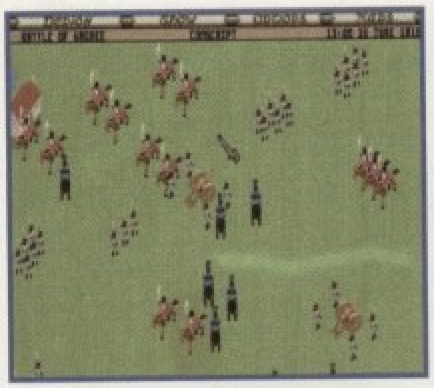
- Publisher: MicroProse
- Developer: Mythos Games
- Disks: 5
- Price: £34.99
- Genre: Strategy
- Hard Disk Install: Yes
- Control System: Mouse
- Supports: A500/A600
- Recommended: 68000



Check out your remaining supplies and finances in the monthly report



Recruit soldiers to make your team of troops the strongest possible

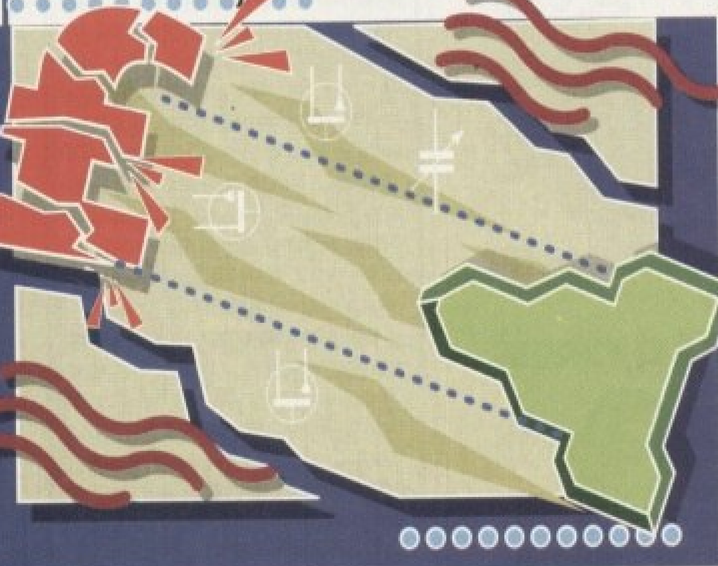


Two highly-skilled brigades locked in battle



You get to select which side you will represent. Where do your loyalties lie?

system essentials



Andy Maddock steps up to bring you some more re-releases. This month, Indiana Jones and the Fate of Atlantis and Fields of Glory are the unlucky victims

Fields of Glory

Fields Of Glory, or FOG as it is more commonly known, is a battlefield/strategy leadership game which to be honest does not spark much interest for the majority of Amiga games players. However, there is still the minority which must be catered for.

The idea is to control the Anglo-Allied, French or Prussian forces and make tough decisions to lead your troops to victory. You are thrusted into 1815 when Napoleon escaped from Elba, made his return to Paris and became Emperor of France. The Duke Of Wellington's Allied-Army joined forces with Blucher's Prussians to battle Napoleon, and this became the Battle Of Waterloo.

Throughout the game I managed to stop myself from bursting out a verse from a popular ABBA song, and sadly that was my only real moment of excitement.

Basically, the idea is to position your troops or join them together and then set your Light Brigades ready for battle among other battle-type things. Once ready, you can set your attack and watch your decisions physically take place as you sit well out of the way, and while you wait you will be informed of certain deaths of commanders and other important personnel. To add some extra spice, not only must you defeat your opponent, you must complete the task against the clock.

The Fields Of Glory database is a dream if you want to find about all different kinds of brigade details. You are given ratings of all-important commanders, troops and artillery which can be especially helpful in deciding where your opponent is most vulnerable.

The presentation factor is very good, with well implemented menus featuring colourful pictures of battle sequences. The action itself is set out on a map, and you can search around, view the other sides and look at their armoury. The graphics are fairly difficult to make out, but with the aid of a zoom function all is revealed. Another flaw is that you don't really have an idea of where to position your troops or what to do with them.

However, if you have a particular interest in Napoleonic warfare and consider yourself a great leader then you could be more than adequate at coping with this.

50%

- Publisher: MicroProse
- Developer: MicroProse
- Disks: 2
- Price: 16.99
- Genre: Military Action Game
- Hard Disk Install: Yes
- Control System: Mouse
- Supports: All Amigas
- Recommended: 68000

AMIGA SILVER AWARD

Indiana Jones And the Fate Of Atlantis

- Publisher: Kixx XL
- Developer: LucasArts
- Disks: 11
- Price: 16.99
- Genre: Adventure
- Hard Disk Install: Yes
- Control System: Mouse
- Supports: All Amigas
- Recommended: 68000

Indiana Jones has had a fairly lengthy life-span over the years with arcade releases, and now, obviously, with the move up to adventure games. In this release, Indy dons his dusty slacks and takes steps beyond in the Fate of Atlantis, and as an archaeologist he must discover and explore the powers of Atlantis. However, hot on his tail are Nazi agents, eager to put a stop to Indy's meddling and lay their hands on the powers themselves.

Indy's career began with an arcade scrolling platform romp which was basically a points fest. Then came The Last Crusade which had fairly good graphics and a reasonable plot, but sadly became a huge chore with so much disk-swapping.

It was a brave move to turn to the more exciting adventure genre. However, the disk-swapping glitch became more of a problem than first thought. This is the case with many adventure games at the moment, and is what immediately put me off – the massive amount of disks were sure to inflict blisters the size of tennis balls. However, after a good solid hour of playing there were none, as the story unfolds consistently and limits disk-swapping right down to the minimum. If you're a proud owner of a hard drive then there's no fuss whatsoever.



I really don't think I want to see that! Oh! You mean the orichalcum!

The good thing that stands out in adventures is the fact you can decide what to do, when to do it, and how to do it. There are no hard and fast rules you must obey to reach the end – you can play it at your own pace. The graphics have been carried over from the last adventure of Indiana Jones, and the digitised effects work with the atmospheric tunes, creating a completely different world.

If you've got time on your hands and are a fan of Indy then you'll enjoy the adventure as it all slowly unfolds. However, have a look around at other adventure games which may appeal more.

72%

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AMIGA GUIDE

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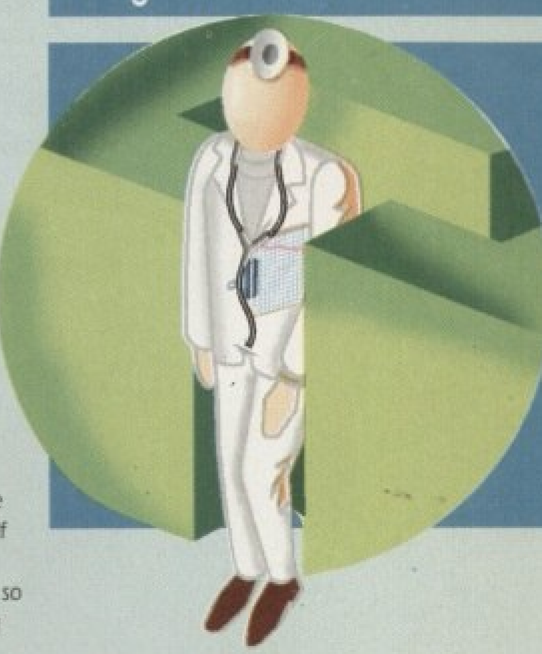
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Better by design?

Amiga Medical Part 5



Frank Nord churns through your standard start-up-sequence to see how things can be improved

The startup-sequence is one of those things you are advised never to alter. "That's what the user-startup is for", say the sanctimonious Amiga know-it-alls. For the most part they are quite right. You shouldn't just bung the assigns for some game into your startup-sequence, but there are occasions when you will find it extremely useful to edit it.

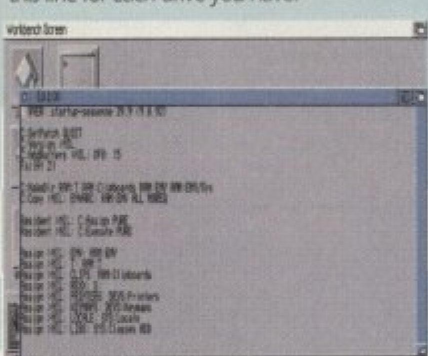
First of all, if you have been paying attention to the series so far, you will remember that I said that you might want to change your REXX: assign from its standard ludicrous position in S:. I also said you might want to change your FONTS: assign, and both these assigns are embedded in your startup-sequence. There is also a load of redundancy built into the startup-sequence just in case there any problems, which slows down its execution and results in unnecessary reads from disk or hard drive. Let's see if we can't clear it all up.

The first section of the startup-sequence for Workbench 3.0 looks like this:

```
; $VER: startup-sequence 39.9 (9.8.92)
C:SetPatch QUIET
C:Version >NIL:
C:AddBuffers >NIL: DF0: 15
FailAt 21
```

The first line is prefaced by a semi-colon (;) which tells AmigaDOS to simply ignore this line. As such we can leave it in, especially as it serves a useful purpose if we need to find out what version of the startup-sequence we are running.

The next line is very important and you shouldn't put any commands before it unless you are explicitly instructed to. Setpatch patches the Kickstart ROMs in your machine to make them as up-to-date as possible. The version command simply returns the internal versions of Kickstart and Workbench. Addbuffers, in the following line, sets the read buffers for df0:. If you have loads of memory and a faster processor, then you can up this value from 15 to, say, 50 to give you a slight speed increase for your floppy drive. If you have more than one floppy, you can duplicate this line for each drive you have.



Here's your bog-standard Startup-Sequence, just waiting to be ravaged



DOSDrivers are similar to mini-mountlists as used by older versions of Workbench

The failat command is there to check whether you actually have a DF0:, if you don't then the buffers won't be added.

The next section in our standard startup-sequence should look like this:

```
C:MakeDir RAM:T RAM:Clipboards RAM:ENV
RAM:ENV/Sys
C:Copy >NIL: ENVARC: RAM:ENV ALL NOREQ
Resident>NIL: C:Assign PURE
Resident >NIL: C:Execute PURE
```

The first two lines from this section set up your Workbench preferences, clipboards and a temporary directory programs can use. So we start off with the creation of four directories in RAM:. Notice that the command to create these four directories doesn't have to be repeated four times, but that everything is all on one line.

RAM:T is the temporary directory, RAM:Clipboards is, fairly obviously, the directory used when you use cut, copy and paste, and RAM:ENV and RAM:ENV/Sys are the directories that environment variables, like your Workbench preferences, are kept in. The next line copies the entire contents of the ENVARC: assign (including sub-directories) into the RAM:ENV directory. The ENVARC: directory is situated in your Workbench's Prefs directory, in the env-archive drawer.

As you probably already know, when you use a Prefs program you can either Save, Use or Cancel. Saving saves the settings you have made to the ENVARC: and ENV: directories. If you Use the settings, they only get saved to your ENV: directory. This directory is in RAM: so what happens when you reboot? Everything gets lost – which is why ENVARC: exists.

The next two lines copy the Assign and Execute commands to RAM: and set them so that when they are called they will be executed from there, speeding the whole boot process up. They get removed from RAM: at the end of the startup-sequence, so you don't have to worry about them taking up precious memory.

```
Assign >NIL: ENV: RAM:ENV
Assign >NIL: T: RAM:T
Assign >NIL: CLIPS: RAM:Clipboards
Assign >NIL: REXX: S:
Assign >NIL: PRINTERS: DEVS:Printers
Assign >NIL: KEYMAPS: DEVS:Keymaps
Assign >NIL: LOCALE: SYS:Locale
Assign >NIL: LIBS: SYS:Classes ADD
Assign >NIL: HELP: LOCALE:Help DEFER
```

This next chunk of the startup-sequence sets up the system assigns. The one to change here is the REXX: assign from S: to a directory you will already have made called, perhaps, ARexx.

```
IF NOT EXISTS SYS:Fonts
Assign FONTS:
EndIF
```

This is the sort of thing we want to cut out – IF-EndIF statements. Our FONTS: assign should be fairly permanent, so add a line to the end of the previous sections with:

```
ASSIGN >NIL: FONTS: SYS:FONTS
```

or wherever you have put the fonts directory.

```
BindDrivers
C:Mount >NIL: DEVS:DOSDrivers/~(#?.info)
```

Binddrivers is the command that adds any peripheral with something in the Expansion drawer to the system. Graphics cards, multi-port cards and hard drive controllers are all examples of peripherals that use the Expansion drawer. The second command in this section, the Mount command, adds any tool with a file in the DEVS:DosDrivers directory. Examples of these include the PC0: driver and CD-ROMs:

```
IF EXISTS DEVS:Monitors
IF EXISTS DEVS:Monitors/VGAOnly
DEVS:Monitors/VGAOnly
EndIF

C:List >NIL: DEVS:Monitors/~(#?.info|VGAOnly)
TO T:M LFORMAT "DEVS:Monitors/%s"
Execute T:M
C:Delete >NIL: T:M
EndIF
```

On every Workbench disk DEVS:Monitors does indeed exist, so we can dispense with the first IF statement and the corresponding EndIF at the end of this section – the rest can stay as it is:

```
SetEnv Workbench $Workbench
SetEnv Kickstart $Kickstart
UnSet Workbench
UnSet Kickstart

C:IPrefs

C:ConClip

Path >NIL: RAM: C: SYS:Utilities SYS:Rexxc
SYS:System S: SYS:Prefs SYS:WBStartup
SYS:Tools SYS:Tools/Commodities
```

This section can also be left as it is, but if you use the Shell a lot you might want to add some more directories to the Path statement. ConClip can be removed to save a very small amount of memory as long as you don't mind not being able to copy and paste text from Shell windows:

```
IF EXISTS S:User-Startup
Execute S:User-Startup
EndIF

Resident Execute REMOVE
Resident Assign REMOVE

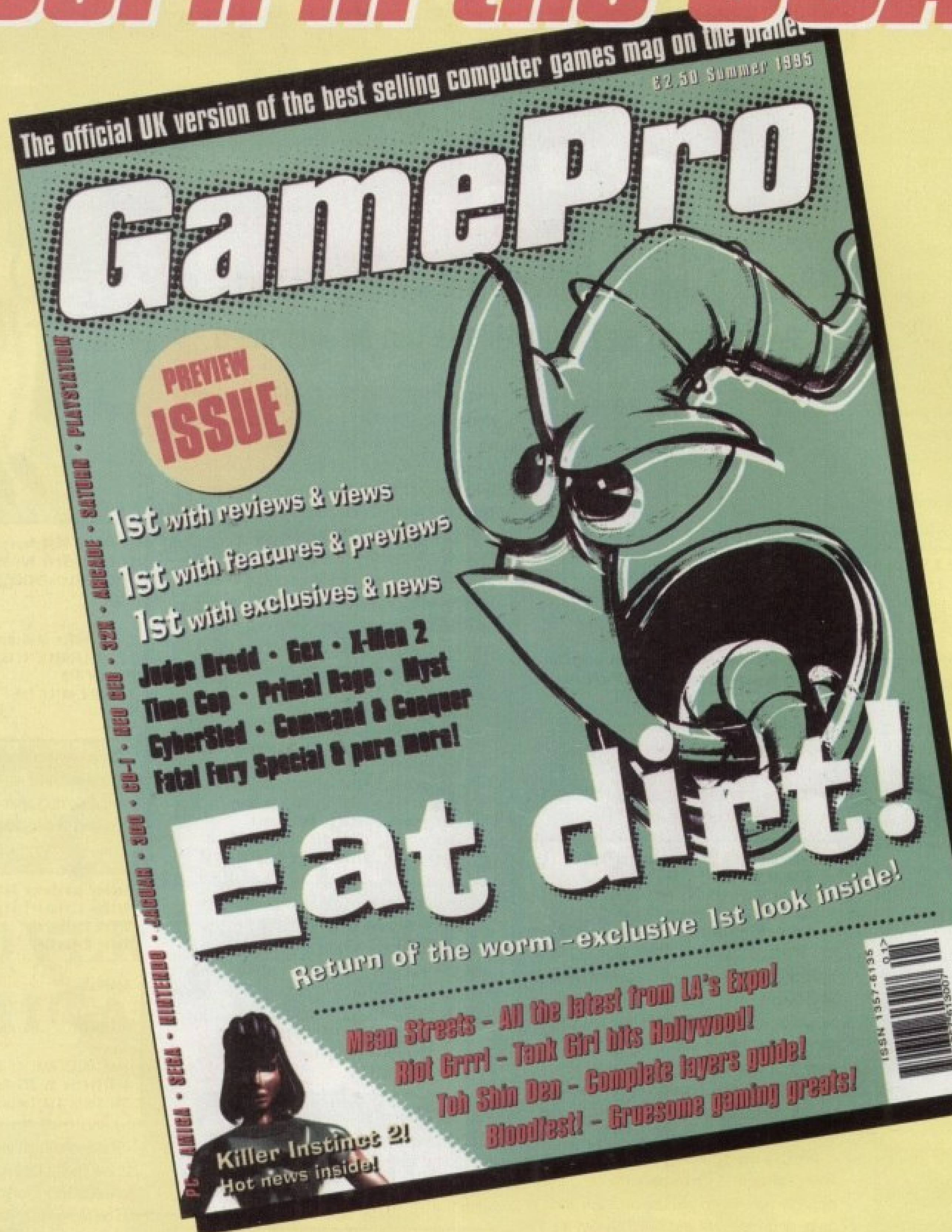
C:LoadWB
EndCLI >NIL:
```

If you've been using your Amiga for some time and especially if you have been following the advice given in this column, you will hopefully have a healthy User-startup going already. If not keep trying.

Not much difference

While this column has dealt with Workbench 3.0s Startup-sequence, the one from Workbench 2.04, 2.1 or 3.1 doesn't vary too much from this pattern, so you should be able to follow through all the advice given here.

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GamePro

the official UK magazine

Amiga 3D Part 4



Fanning the flames

Stevie Kennedy looks at a bag full of tricks involving flame effects and the art of transparency

One of the most impressive tricks with a ray tracing package, and the one most likely to have viewers asking "how'd he do that then?" is the flame effect. Candles and space ship engines are only the most common uses for a technique which can be used to simulate smoke, glowing balls of plasma, ghosts – you name it.

Users of LightWave 3D are particularly spoiled in this department. The NewTek package's excellent transparency effect can be carefully adapted to suit most requirements, and with its envelope control of brushmaps and transparency values themselves, LightWave makes for a pretty powerful arsonist.

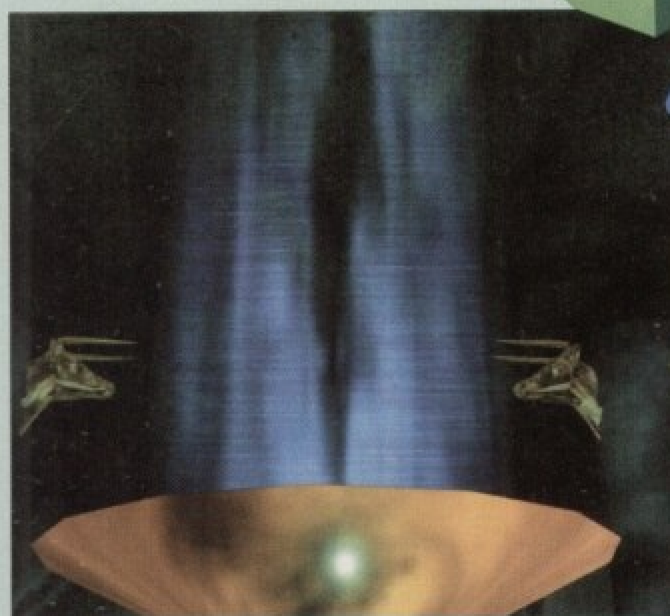
Imagine fans are a little left out when it comes to flames, and particularly transparency. Even the 3.0 version's transparency texture is a stop-gap measure with limited uses, and if you have an older version of Imagine you simply can't achieve the effects we're pursuing.

The Imagine user with a burning need for pyrotechnics can try an old and simple trick by putting two candle flame-shaped objects inside each other and making the inner one a dark red-orange. Leave the outer object bright yellow and make both about 50 per cent transparent using the 'transpar' texture. For a better effect, try making the outer object a little bit more transparent, but don't go too far – real flames aren't actually all that see-through. To simulate the flickering of flames you'll have to use a paint package to produce a simple two-colour flame animation, then wrap this sequence of images onto the two flame objects. By offsetting the axes on the two objects to ensure they don't show exactly the same view of the images, a reasonably good effect can be achieved.

Your brushmap sequence should be twice as wide as the flame object you are going to use so that wrapping in the X axis doesn't distort it too much. Don't bother wrapping in the Z axis for candle effects, as this will just make them look stretched out.

With version 3.1 the fire texture can be used to good effect, but be warned that it is very slow to render. Altering the aspect of the flame object and making the flames bright blue with a much faster than normal speed makes for a decent thruster, and patient experimentation will result in anything from a candle to a bonfire, so use this texture if you have it (and either a 68040 or lots of spare time).

There's no need to mess about with brushmaps, however, and the flames themselves are pretty realistic – especially when used for normal fires rather than more exotic sci-fi effects. To force a more elongated thruster look, scale down the X axis of the texture itself using Edit Axes and increase convection speed by a factor of two or three.



Could be better, but this flame is a lot more controllable than either the Imagine texture or the (faster and more convenient) LightWave Pro method

TALENTED

LightWave users don't have the same procedural textures available to Imagine 3.1 owners, but the program's other talents make up for this. You will have received a flame surface with last month's LightWave Pro disk, and it's good enough to slap on and use. For a better result, though, it can be altered. The default for this sort of texture, and the method most commonly used, is to slap on a transparency envelope and use the fractal noise procedural texture to create an animated flame. In this way, the texture's velocity creates movement, and where there are darker areas in the fractal noise effect these become more transparent.

However, the drawback is that the flame object itself has sharp, well-defined edges which are unlike most flames. To improve the effect, make the object 100 per cent transparent and use the fractal reflections IFF as a cylindrical image map on the axes, along which you want flames to travel.

Make the edges transparent and re-size the texture itself to match your object. A thruster, for example, will be much longer than it is broad and your texture size must reflect this – don't use automatic sizing. To complete the effect, use texture falloff to ensure the outer edges of the flame are invisible and that the effect stops before the abrupt (and unrealistic) end it would normally meet at the end of the object.

Sample values for a one metre-wide flame which is eight metres long would be falloff of 110 per cent in both Y and Z (to ensure transparency at the edges), and 15 per cent in X (for a flame travelling along the X axis). This would ensure that the flame tapered to a point as it moved away from its source. All you need do now is set a texture velocity, something which is best done over 25 frames using very low resolution previews to create a one second test animation.

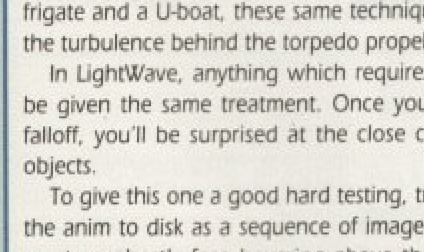
A hundred and one uses

It takes a fair amount of faffing around and experimenting to arrive at a LightWave flame object with which you are happy, but the end result is better and much more flexible than anything to be found in Imagine. I've used versions of the above surface for everything from candles to weird temple altar flames and space ship engines, with only a little editing.

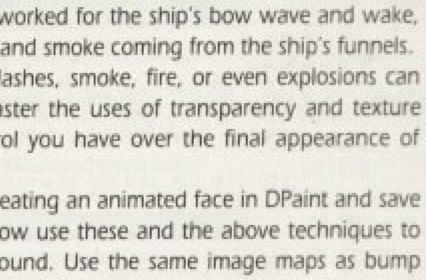
In fact, the use of texture falloff, transparency, and image maps instead of the LightWave Pro method can lead to lots of other effects. In one render which included a frigate and a U-boat, these same techniques worked for the ship's bow wave and wake, the turbulence behind the torpedo propellor, and smoke coming from the ship's funnels.

In LightWave, anything which requires splashes, smoke, fire, or even explosions can be given the same treatment. Once you master the uses of transparency and texture falloff, you'll be surprised at the close control you have over the final appearance of objects.

To give this one a good hard testing, try creating an animated face in DPaint and save the anim to disk as a sequence of images. Now use these and the above techniques to create a ghostly face hovering above the ground. Use the same image maps as bump maps and give them a high texture amplitude of 400 per cent or so. The result won't be disappointing.



Imagine 3.1's fire texture can be used as is for good flames, but renders very slowly and could be more flexible



Engine thrusters require a fast flame with no tell-tale edges, so be brutal with texture falloff and transparency



A picture says a thousand words, though repeating 'crash and burn' 333 times is about as far as this Imagine 3.1 fire image goes

The AmigaDOS console device

Menu coding, scripts that react at once to keypress data, console display control - it's all here

A lot of ARexx users tend to write scripts where program output is achieved using ARexx's Say instruction coupled to a conventional Shell window. Unfortunately, this approach has some disadvantages such as the need for the Return key to be hit before the program takes any notice of your input.

This effect, due to an inherent characteristic of the normal Shell window, can be eliminated by using a special console window known as a 'raw' window – so called because its input stream provides raw keypress information as soon as keys are pressed). Another limitation with Say is that it always forces a new line at the end of its output and sometimes this may not be exactly what you want. The solution here is to forget about Say and use ARexx's file-oriented I/O (input/output) instructions to read and write to the window instead. As far as opening a raw window is concerned this can be done by using the built-in library function Open() in this manner:

```
call Open(raw_window,'RAW:40/40/560/200/exam-
ple_script.rexx')
```

The second argument specifies the console type, top-left position and initial size of the window. The first argument, which I've called raw_window, is the file handle used for all I/O operations connected with the window. For example, to write text strings into the window we would use the Writech() function like this:

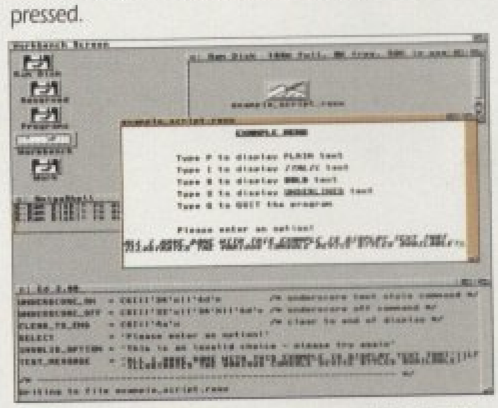
```
call Writech(raw_window, 'some example text')
```

There is also a corresponding file input function called Readch(). The arguments needed in this case are the file handle and the number of characters to be read, so the code to collect one character from the raw_window and place it in a variable called keypress$ can be written as:

```
keypress$=Readch(raw_window,1)  /* read a char-
acter */
```

Because, in this case, we are dealing with an AmigaDOS raw window, the function returns immediately a keypress is detected, i.e. the program does not need to wait for the return key to be pressed.





A few control sequences are all that are needed to produce text displays like these

Text style	
0	Plain text
1	Boldface
3	Italic
4	Underscore
7	Reversed character/cell colours (inverse on)
22	Bold off
23	Italic off
24	Underscore off
27	Reversed off (inverse off)
Character colour	
30-37	system colours 0-7 for character colour
39	reset to default character colour
Character cell colour	
40-47	system colours 0-7 for cell colour
39	reset to default character colour
Background colour	
>0-7	System colours 0-7 for background colour

Table 1: Some useful graphic rendering control settings (in ASCII form).

Putting it all together

The example on the cover disk is a simple Shell 'menu' program which displays a list of things to do, asks the user to select an option, collects the response, and then carries out the appropriate action. The thing to notice is that, having opened a raw window, all I/O operations are done using Writech() and Readch() and it is this, coupled with the use of a cursor positioning function, which provides the greater flexibility.

I've chosen, somewhat arbitrarily, to provide options which specify various text styles using a series of 'pseudo-constant' definitions placed at the start of the program (using the ideas outlined in previous instalments). These define text messages, special constants and, of course, the console control sequences themselves.

Incidentally, it is well worth knowing a bit about console device use. Some console device control sequence characters, like Backspace (8 hex) and Return (13 hex), behave just like you'd expect from their ANSI/ASCI definitions, but others produce more Amiga-flavoured responses. A Linefeed, for example, gets translated to the Return/Linefeed combination, the Bell character (07 hex) produces a DisplayBeep() Intuition call, while the reception of a Formfeed character (0C hex) actually clears the display.

As well as these simple commands, there are a host of more sophisticated sequences available that handle cursor positioning, line insertion, scrolling, event reading and so on.

Console device use is a massive subject in its own right and you'll need to look in the Amiga ROM Kernel 'Devices' reference manual for the full story. One sequence worth mentioning, because it finds use in a great many ARexx scripts, is that used for changing the text style, character, character cell, and background colours used by a console window.

The general arrangement here is that you send a CSI (control sequence introducer) character followed by any number of graphics setting parameters. With the exception of background colour settings – which must be specified last – these parameters can be supplied in any order, separated by semicolons (3B hex). The end of the sequence should be marked by sending a 'm' (6D hex) termination character.

Table 1 gives control sequence values for a number of useful effects. Do note that the numbers shown represent individual ASCII characters to be transmitted rather than the equivalent hexadecimal values. For example, to select an inverse display you must send the ASCII character '7', i.e. the value 37 hex. Similarly, to turn off the inverse display you'd send the two ASCII characters '27', i.e. 32 hex followed by 37 hex!

You'll be able to see examples of how such sequences are used to produce italics, bold print and so on by examining the cover disk script (and also running it from a Shell window using the RX command). Next month I'll round off these discussions with some other console device related details!

Amiga Computing

Doom & Maelstrom on your Amiga? Hell, yes!

August's ***Amiga Computing*** is going to be a veritable mine of information. Ever wanted a PC or Mac so badly that you would actually go out and buy one? Of course not, but we're going to show you how easy it is to emulate one on your Amiga.

In a follow-up to this month's in-depth coverage of the Escom buy-out deal, prepare for an interview with Manfred Schmitt, the head honcho of the company that now owns Commodore.

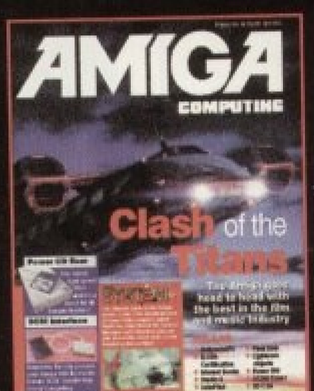
We'll also be having a close look at the latest release of that world-beating image processing tool, Photogenics, which now hits version 1.2.

The games players among you will be pleased with the superb coverage we give to the latest games releases, including Virocop, and previews of forthcoming games.

Together with reviews of AmiTCP/IP v4.2, Fiber Factory for LightWave and much, much more, ***Amiga Computing*** is the only Amiga magazine you'll ever need.

Amiga Computing – on sale from 29 June.

PS Feeling lonely? Want something informative, interesting and inspired on the Internet? Take a look at our official home page by typing in the following URL web address:
http://www.demon.co.uk/amigacomp/







Oops! wrong planet

Phil South looks at two new Internet books

There are few things as useful to the Net Potato at large than the 'really Good Guide Book.' Okay, so you can surf about like a loony clicking on buttons, looking about for cool stuff and running up your phone bill, but it's much more elegant to know where you're going and go right there, perhaps stopping off a little on the way. It's like the difference between travelling somewhere by car with a map and just diving into your car and seeing where the road takes you. The latter approach burns a lot of gas to no end, and probably gets you lost. The former approach gets you to some very interesting places quickly and efficiently.

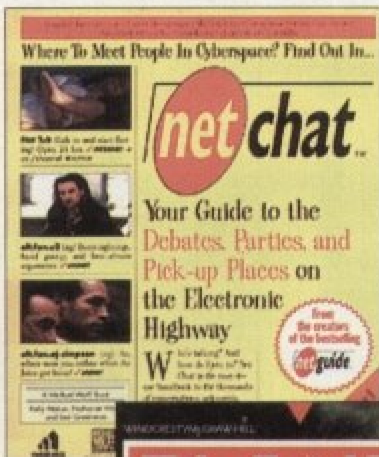
One such book of the plethora of dire Internet books that have recently flooded the market is 'Planet Internet' by Steve Rimmer (Windcrest/McGraw Hill), a self proclaimed "irreverent guide to the Internet's pubs, curiosity shops and back alleys."

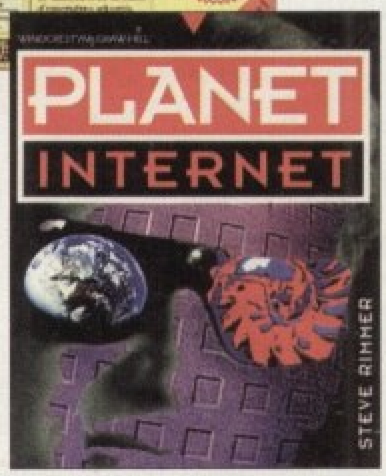
A lot of Internet books will tell you how the Net works and give you a lot of information about protocols and really dull stuff like that. Planet Internet gives you a really useful list of places to visit on the Internet and a snippet of information from the relevant sites.

There are a number of books which try to cram in a load of URLs and gopher and FTP sites into as big a book as they can find – most of which are out of date and no longer there. The difference with Planet Internet is that it concentrates on quality, so although there are relatively few references in it, it is very good and the sites have been quite extensively researched to make sure, within a reasonable certainty, that the sites are going to be where you left them.

The other thing I find refreshing about the book is that it has a lot of style. It has been luxuriously designed and printed, and is an extremely good book to read and hold. The content will keep you chuckling long into the night, and once you have it and have finished reading it from cover to cover (which is what you will want to do to it, believe me), it will stay very close to your computer for when you fire up your Net software.

Verdict? I think you can tell from the way I talk about it that this is a book I like rather a lot. It's a slickly produced book with a nice feel to it, and there is, in fact, a lot of information in it. Definite thumbs up.







In comparison

The other book on review this month is 'Net Chat' by Kelly Maloni, Nathaniel Wice and Ben Greenman (Random House/Michael Wolff & Co), the makers of Net Guide. Where Planet Internet is specifically targeted at the strange, Net Chat is aimed at the sleazy. The idea is that you can pick up people on the Net and have Cybersex.

Er, actually no, that's not really what it's about, but that's what the cover lines would have you believe. This is tabloid Net journalism. The cover is lurid and the content spiced with nudish pictures downloaded from various BBS sites and various non-Net places like CompuServe. (CompuServe? I thought that was a family show, no nudes allowed? Oh well, you live and learn.)

Again, I wouldn't like you to think I don't like this book, because actually I do. It has its failings, however. Firstly, it goes for quantity rather than quality. Secondly, it contains a lot of info about BBSs not available in the UK – in other words it is a little bit US-centric. The preface of the book says that the Net is The Internet, plus CompuServe, Delphi, America Online, The Well, Echo, FidoNet, which of course it isn't, at least not to me. The Net is a place I can reach from my computer, wherever you might be in the world. It is not scratty little Adult BBS' in Atlanta, Georgia.

A lot of the more interesting things in the book are on BBS' rather than on the Internet, so are largely inaccessible from the UK, and that almost halves the amount of hard info you'll get out of the book. It is an entertaining read, however, and although most Net heads would know a lot of this stuff already, it is interesting to see how much dubious material there is on the Net.

The book is one of the few I've ever seen with an Adults Only sticker on the cover. Reading some of the entries inside I can easily see why, and I welcome this kind of approach. Some things are for adults and some are for kids, and there's little point in softening everything so it won't offend anybody. But I think more than anything that the sticker is a marketing ploy to give the book more weight than it actually has.

Net watch

For those of you who are still looking around for new places to explore on the Internet, how about some of these for size:

Satellite TV Images – some really odd TV pictures from around the globe, all digitised and ready to paste into your latest multimedia extravaganza.
http://itre.uncecs.edu/misc/images/images.html

atom Co. Ltd. – a very cool Japanese site with lots of photographs and very Japanese arty stuff. Some nice links too.
http://www.atom.co.jp/

Nomadic Research Labs –ever wonder what happened to that wacky Tech Nomad dude, Steven Roberts? You know, the guy who rode across America on a recumbent cycle which had a SparcStation in the trailer? Well, he's off building the Microship, a seagoing version, and this is where you can get updates on what he's been doing.
http://microship.ucsd.edu/

The Wiretap Web Site – home of a lot of odd texts, the site has now moved over to a more modern Web-based interface. Lots to read, and well worth the effort of downloading something.
http://www.spies.com/

The WWW Virtual Library: Unidentified Flying Objects – the best source of info about UFOs including links to other sites.
http://www.bgsu.edu/~jzawodn/ufo/index.html

Look out next month for a new front end to your Amiga TCP/IP exploits on the Internet.

If you have any BBSs you'd like to tell me about, or there's anything you'd like to find on the Internet but can't, then please feel free to ask me. Hell, I can only say no! You can reach me by e-mail at these locations:

Internet
phil@snouty.demon.co.uk

CIX	snouty
The Direct Connection	snouty
CompuServe	100102,1500
Delphi	snouty@delphi.com

or by post to:

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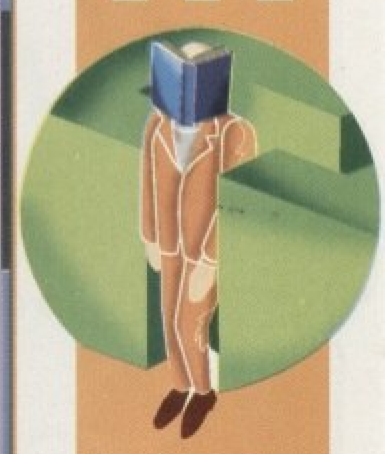
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Style is a state of mind

Frank Nord has a look at style tags and their time-saving uses



A friend of mine is laying out a brochure for someone he knows. He admits he isn't very good at all this DTP malarkey, so he came and asked me for some help. He has a good eye for layout, but the technical intricacies of using PageStream were defeating him. Anyway, I suggested he use my machine to layout this brochure so that a) I would be able to assist him in his endeavours, and b) he would be giving me some new material for this column.

And so we looked at the design elements for the brochure. The client wanted an A4-sized brochure with an insert that, if you can imagine it, was another sheet of A4 folded along its longest axis one third of the way across the page, so that when you opened the brochure there was a flap one third of a page in size, followed by a second flap, two thirds of a page in size, followed by the back page of the brochure. All in all, a nice layered effect.

The first thing we did was to make a mock-up of the brochure using a sheet of A3 and one of A4. Then we got the text and images the client wanted inserting, but at this point there had been no decision made as to typography. My friend had made some suggestions and had started laying out the text on the pages, but when the client saw the results he wasn't very happy with the text style and had only really gone ahead with things because he wasn't sure about what typefaces were what. This demonstrated the need for font spec sheets and even more importantly, style tags.

TIME-SAVERS

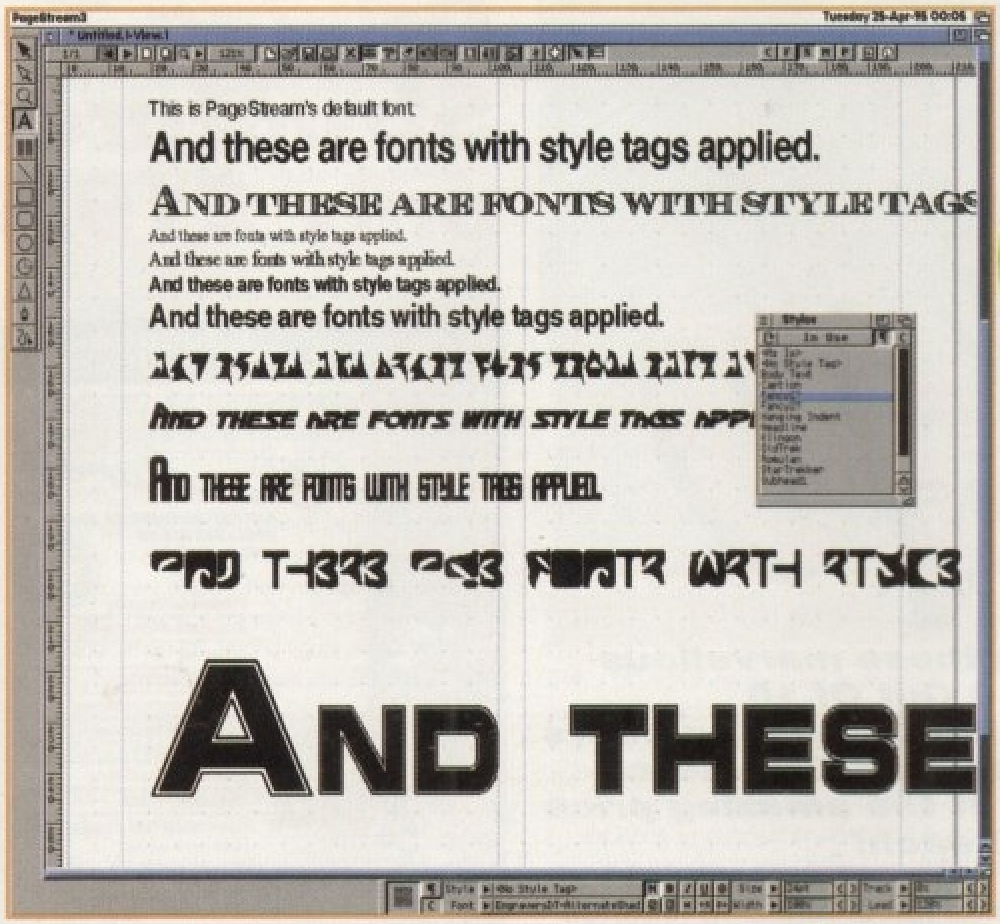
I know that whenever I mention Style tags to anyone, they groan and say they are a waste of time and more hassle than they are worth to set up. "Bosh!", I usually retort, and with good reason as my friend was to discover as he spent an hour and a half reformatting the text he had put on the page. This time I sat down with him and we set up a range of style tags pertinent to the situation. We made a headline tag, one for section headings, subheadings, body text and finally, one for captions.

This took about ten minutes to set up, but once we had finished, the longest time involved in changing the typefaces used was waiting for PageStream 3's screen to update. What is even better with this version of the software is the fact that you can now set up style tags for objects as well as text. And, as we all secretly know and understand, however much we grumble about it, style tags are almost guarantors of consistency between documents.

If you are writing a newsletter, or putting together a fanzine, there is nothing worse for your readers than having the style jump around from one issue to the next. "But", I hear you cry, "we don't all write newsletters or magazines." I'm sure this is the case. However, even if you only use PageStream occasionally, it would be beneficial for you to set up some often-used styles, for an address perhaps, or differing styles for personal or business letters.

Again, if you are using PageStream 3, think how much easier it would be to simply use style tags for gradient fills and border styles, rather than having to draw your box, go to the line/fill requester and make numerous clicks with the mouse and taps on the keyboard.

Once you have gone to the effort of sitting down and setting a few up, life will be so much easier in the future. You wouldn't even have to set aside a special session to do it – just remember, the next time you want a gradient fill, or particular line style, don't just make it up as you go along, set it as a style tag. This way you will be able to build up a library of useful tags for both text and objects with very little effort.



A wide variety of styles, not all of which are useful to sane people

Star Trek fonts

As you can see from the screenshot, the same piece of text can have quite a different look with a different typeface, or even just a different style or size. Some of the fonts used here are based on those used in the Star Trek and Star Trek Next Generation TV shows.

These are complete, commercial postscript fonts which are available from EM Computergraphic 01255 431389. I must admit to not really being a fan of the Star Trek shows, but you have to admire the obsessive nature of someone who could sit down and create a Klingon or Romulan typeface.

PageStream 3 progress

Well, as of 24 March, the version number for PageStream moves to 3.0g. This version is faster again than 3.0f, but still not up to full speed, and printing for non-postscript printers is still pretty slow, although landscape printing has now been implemented. For more professional use, spot colour separations are not yet implemented, and neither is plate control, but support for the Fargo Primera Pro has been finalised.

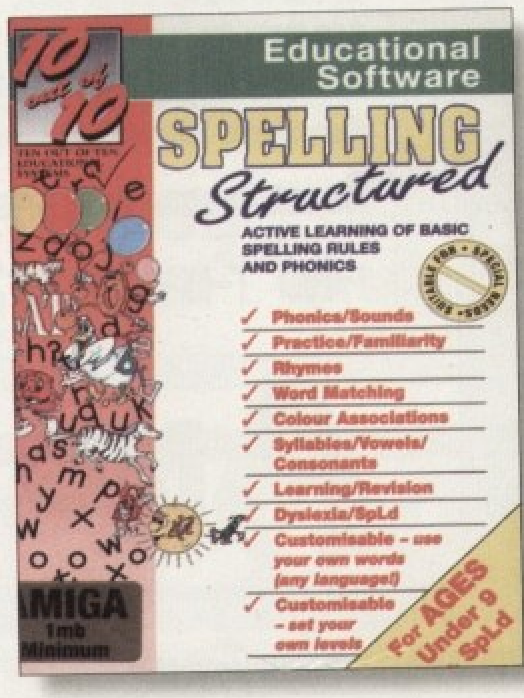
Altogether there are some 230-odd lines of improvements made to the previous version, and the list of features that have not been implemented just keeps shrinking. SoftLogik have also announced new Import/Export modules for JPEG and Wordworth documents, but, surprisingly, the fact that these are not going to be included with PageStream and represent an extra expense ($20 each) to be incurred by the hapless PageStream user has raised more than a few eyebrows and has caused some rather uncomplimentary e-mail to flow SoftLogik's way.

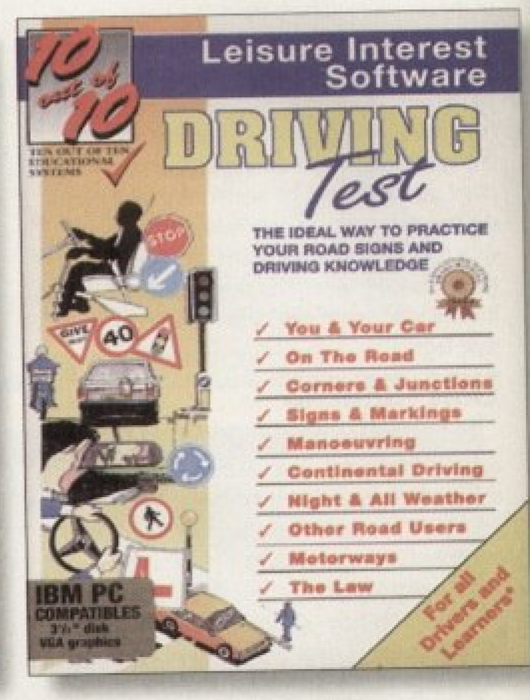
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Dear Phil...

AMOS

Phil South looks at some readers' questions about AMOS

I've been asking people to send in Amos queries lately, and sure enough we've had a torrent, especially since we bundled the Easy AMOS program with our magazine. A lot of the problems are easily solvable, such as syntax errors and omissions, but others are a little bit more complex. But let's pull a few out of the bag and see what's going on, shall we?

The first question comes from John Eustace of East Dulwich, who writes: "I have been with Amos a short time now, so I'm writing to say please could you answer this problem I'm having with this simple routine. Here's the routine:

```
Repeat
  For X=1 To 90
    Wait Key
    Print X
    X=Rnd(90)
Until Mouse <> 0
```

or the last line could read:

```
If Mouse=1 Then Exit
```

This is just one way I have tried this routine but without CTRL-C I can't seem to break out of the loop."

Well, for a start you have a FOR without a NEXT in there, and the statement isn't really required. It doesn't refer to a NEXT, and the numbers are randomised by the RND statement further down the program anyway.

Secondly, the command is MOUSE KEY, not just MOUSE. The other problem is with WAIT KEY which prevents the mouse button being trapped, unless of course you hold down the mouse key and press any key to get it working.

A better and more efficient listing would go something like this:

```
Repeat
  Print X
  X=Rnd(90)
Until Mouse Key<>0
```

or perhaps:

```
Repeat
  X=X+1
Until X=90
```

or something similar to that.

Next we have a couple of people who are confused by the listing we gave you for the Easy AMOS tutorial, and it all circles around the line:

```
Palette
$0,$FFF,$FFFF etc.
```

I have no trouble with this line, so I suspect it's a formatting problem. If the program we use to put the magazine together encounters a line with no breaks in it, it breaks it wherever there is a space, so the line should read:

```
Palette $0,$FFF,$FFFF etc.
```

As well as this problem, KH Tjoa of the Netherlands asks: "Please advise me how to change my keyboard set-up in order to allow me to type the # symbol. Also what is the difference between AMOS Pro and Easy AMOS?"

The first question is simple, all you have to type is the # on your keyboard. It may be that you have a European setting on your shell keyboard, which means it will be a different key. If you can't find it, how about the £ symbol? What does that type – look at your copy of Amos? The second question sounds obvious, but in case you haven't noticed, Easy AMOS has fewer commands, and it also has no AMAL.

Next we have Daniel J Green of Coventry who writes: "I am almost going out of my mind with this little problem, the problem being colours. I want a program that ranges colours from $0 to $FFF. I know it must be able to be done so if you can, please print it in the magazine. My previous attempt was:

```
For N=0 To 4096
  Colour N,N
Next N
```

and I though this would work but it doesn't."

Hmm, this is a conceptual problem as much as a coding one. For a start, you normally only have 15 colour indices to choose from, so attempting to load 4096 into them is doomed to failure.

Secondly, even in HAM mode you can only access up to 64 colour using screen indices, which is what you are doing when you use the Colour command. Also, you are using a numeric variable for Colour when the second figure after the comma has to be hexadecimal, for example:

```
Colour 3,$34
```

You can convert Dec to Hex using the Hex$() command, like this:

```
Print Hex$(34)
```

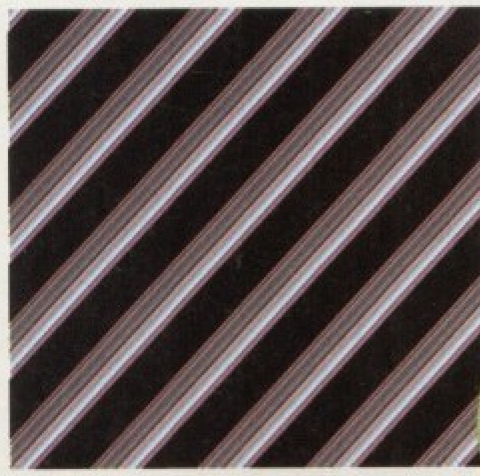
but sadly the hex generated by the command are strings, not figures. Although you can add and subtract hex in AMOS, you can't put a string into an addition. As HAM screens are generally only used as background, you can't really draw on them except in the default 64 colours. That's usually enough and besides, HAM screens are very flickery and fuzzy, so what's the point?

If you want to see an example of what you can do, then look at the following:

```
Screen Open 0,320,256,4096,Lowres
Flash Off : Cls
X=0 : Y=0 : A=0
'
MAIN:
Repeat
   Ink A
   If X>320 Then X=0 : Y=Y+1
   Plot X,Y
   Inc X
   Inc A
Until N=4096
N=0
Goto MAIN
```

I'll be doing a little tutorial on colour in a couple of issues time, so watch out for that. Finally, we have PK Shepherd, who asks: "I've been trying to get a cyclic IFF ANIM to run within a program I've written in AMOS Pro. No matter how I seek to run it, I always get a joggle at the end of each individual cycle. The methods I've been using are:

```
IFF Anim "xxxxxx" To <screen number>,times
```



Daniel Green in Coventry: Apply the example listing given and get this result

and this appears to give a repeat frame at the end of each cycle. Secondly:

```
Frame Load
```

followed by:

```
Frame Play
```

with a DO/LOOP construction as shown in section 07.05.06 of the AMOS Pro Handbook. This gives a blank frame at the end of each cycle, apparently while the LOOP operation is taking place. Is this a bug in my version of AMOS Pro?"

Not a bug as such, just understandable. The animation is buffered and compressed, and if you want the animation to repeat you have to put up with a little joggle at the end. Animation was added to Amos as a bit of an afterthought, and it is really designed to play back an animation from start to finish without much messing about.

Also, bear in mind that the animation will always restart from frame two rather than one, so a lot of the jerkiness might be coming from that quarter. There are supposed to be some ways around this, and I'll look into it for next time.

That's about all we have time for. Let's hear some more of your Amos questions, and we'll see what we can do to sort them out for you. Amos is still the best language to develop software on for the Amiga, and it's going to be a long time before something better comes along. I look forward to hearing from you, and see you next time.



Write stuff

If you have an Amos question, or a routine you'd like to share with the world, then please write to Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP. Please send routines on an Amiga disk with notes on how the program works on paper. Make the routines short (use these routines as a guide) and make them reasonably independent of any graphics and sound support files, although I will make provision for these if necessary.

As long as your ad is ten words or less, it's absolutely free! Should you want more space, you'll find unrivalled value for money – for instance, 25 words cost just £10. Fill in the form below and send it to us with your payments (if applicable) – and remember to include your telephone number!

Classifieds



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◆ Original Amiga Games, Write to: 11 Gorrie Street, Dunfermline, Fife KY11 4BA.

◆ Cumana disk drive, £35. Midi, £15. Modulator, £9. Tel: 0181-810 4049.

◆ The War Horse BBS: 01472 280018 – 24 hrs.

◆ Imagine User Group. For more info call Spencer on 01375 670036.

◆ Amiga contacts! Phone Geoff, 01926 409504 for more details.

◆ Rendale high-quality Genlock S-VHS/VHS £499 for £299. Tel: 01271 870549.

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◆ Pagestream 2.2 wanted. Good condition. Tel: 01656 870598.

◆ Info. Line. Terry; 8 Fleming Gardens. Tilbury, Essex RM18 8JR.

◆ Surra Turbo 28MHZ A500/+ Accelerator 4X speed! £80. Tel: 0181-482 9428.

◆ The NB-5 BBS upto 28.8K 24HrS. Tel: 01924 491461. Amiga only.

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◆ Wanted Amiga books – programming and reference. Tel: Alex 01349 882021.

◆ Contacts wanted for new club. Contact Terry, 8 Fleming Gardens RM18 8JR.

◆ Contacts to swap demos. One to One basis. Tel: 01705 455905.

◆ Contacts wanted, 317a Dersingham Avenue, Manor Park, London E12 6JX.

◆ Amiga contacts wanted. Keron, 76 Crystal Palace Park Road, London SE26 6UN.

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◆ Free diskzine to anyone who sends in programs for inclusion. Contact Alec Carswell, 16 Montgomery Avenue, Beith, Ayrshire KA15 1EL.

◆ A1200 contacts wanted. Craig, 119 Stone Cliff Park, Welton, Lincoln LN2 3LL.

◆ Amstrad CPC464 printer wanted. Tel: 01778 341075. Robert.

◆ 210Mb, 2.5" HD western digital, £80. Tel: 00149 5722 5953.

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M for music

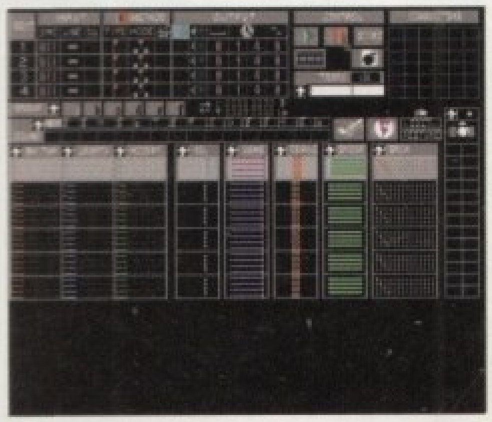
Dr T's 'M' package has recently made its debut on the Amiga and Paul Overaa has taken a look to see what's on offer

Dr T's M program has been around on other platforms for quite a while but since most Amiga users are unlikely to have seen it, a few words about what M is and how it works are clearly in order. Basically, it's a music composition and performing system which allows you to record and modify sequences and riffs in a variety of ways. While M can be used to create and modify complete arrangements, it is not an auto-arranger program as such, rather a composition aid that encourages you to experiment.

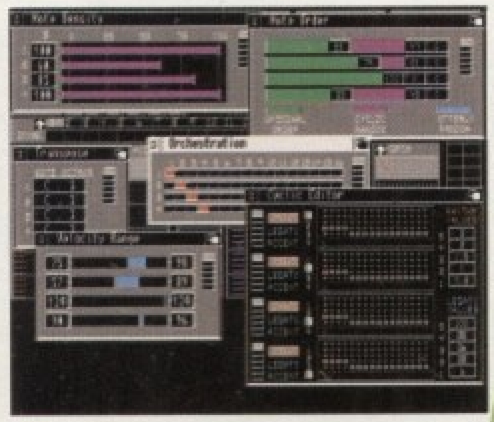
Display-wise, as you might expect, M includes a fair number of gadgets – arrow buttons can be rotated, numerical gadgets can be drag-selected to take on particular values, range bars, clever pop-sidewards gadget menus and many other features. To make life easier for the user, the main screen control types have been split into separate areas for input operations, general control functions (stop/start, tempo setting etc.), variable settings, playback conducting and so on. There's even an area which allows you to store and retrieve 'snapshots' of selected groups of other screen controls, the idea here being that by executing these snapshots during playback it's possible to move from one control set up to another.

M's use revolves around three basic stages, with you first recording or importing the note and chord material to be used. Four 'players', which in essence can be regarded as four individual sequencer tracks, are available so you might, for example, start by playing a melody line using player 1 and then add some backing chords for player 2.

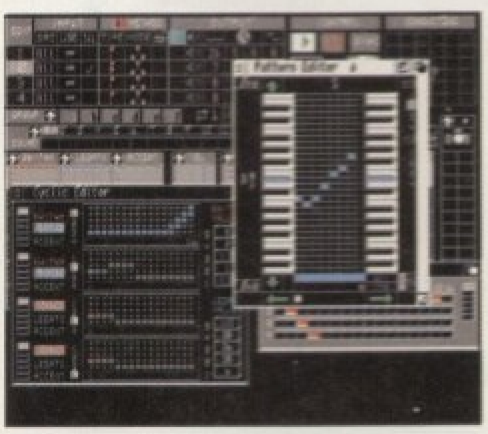
Having done that you are able to control the ways in which that material is going to be transformed during playback. All manner of changes can be experimented with – a melody line might be scrambled, or M might be asked to produce cyclic or random variations to the base material. Because M has settings which allow you to add any amount (from 0 to 100 per cent) of cyclic and random variations, this means results can be obtained that are as near, or as far away, from your original riff as you choose. Needless to say, it's necessary to be sensible with such settings since high levels of random change, for example, may not always produce good results.



The main display page of Dr T's M program.



Dr T's M makes good use of the Amiga's multi-window facilities.



M's pattern editor provides a gateway for using the program without Midi!



REVERSE EFFECT

The important thing about the approach M uses, however, is its reversibility – you can try a setting and if you don't like the results you just reduce or change it to hear a new effect. Incidentally, you can use M to control Midi drum machines as well, and the program provides special modes for this type of use.

There are also various ways of performing your music. You can manipulate M's screen gadgets, move the mouse within a two-dimensional 'conductor' grid or create automatic performance processes. Another control facility offered by M is based around the use of a Midi keyboard, where certain keys are defined as 'control keys' which duplicate many of the functions found within the program's main display.

In essence, having recorded your sequence material, M can then be used to change tempos, key, velocity, duration, note accents and so on. You can reverse melody lines and even do things such as adjusting the 'note density,' thereby allowing M to make choices about which notes from a pattern should sound. There are, in fact, a whole collection of editing functions to choose from and you can, of course, use both Midi and internal sounds and even write M's musical output to disk in standard Midi file form.

M's editing and control features are quite easy to use, particularly since most of the edit functions operate from separate windows. The Orchestration window, for example, lets you send the output of particular players to any chosen Midi channel, while the Pattern editor window lets you view and edit the notes stored in a player sequence.

Midi files can be imported as well and I found this to be a good way of bringing raw base material into the M environment. Although most M users will probably be Midi users, it's worth pointing out that you don't actually need a Midi synth in order to be able to use M on an Amiga. This is because sequences can be created using the pattern editor and subsequently used with M's AmiSynth internal IFF sounds module.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

1 Mb
RAM

First impressions

The Amiga version of M has been reasonably well implemented, although there are some things, such as the use of a very old fashioned file requester, that surprised me. The program certainly has the ability to perform musically interesting pattern changes (effectively creating new riffs and food for thought as it does so), but it is important to realise that it is necessary to spend a fair bit of time getting to know the program in order to get the best out of it. Needless to say, the Dr T documentation is excellent as always and there's plenty of tutorial material to get you started.

On a personal level, I've been quite impressed with this new Amiga Dr T offering, and it has certainly been good fun to use. I do, however, have some general 'conceptual worries' about the program and, at the moment at least, my 'gut feeling' is that this is simply not the sort of music program that will find instant favour among all Amiga musicians. To be honest I hope I'm wrong but on that score only time will tell!

The bottom line

Product: Dr T's M
Supplier: Millenium Music
Price: £79.95
Tel: 01602 241924

Ease of use	**8**
Implementation	**8**
Value for money	**8**
Overall	**8**

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Getting the full picture

Still using the family TV with your Amiga? Gary Whiteley puts the case for buying a dedicated monitor instead



Everyday all across the UK there must be arguments over who gets priority use of the telly. Mum and big sister want to watch Neighbours, while the brothers want to use their Amiga. Dad comes in from work and, once again, finds the same old argument in full swing. Some things never change.

But there can be a solution. In fact, there can be several, dependant on factors such as space, the Amiga itself and, of course, cash. For most folks the last item, cash, will be the crucial one. Serious Amiga users know that it's impossible to do crucial graphics and other quality work on a bog-standard TV, so we simply scrape up the cash and get on with it, but for most cash-strapped families there will inevitably be priorities other than buying a 'proper' monitor for the Amiga.

The simplest, and probably cheapest, fix is a second-hand TV installed in the lad's bedroom so they can blast away to their heart's content. Of course, big sis will kick up a fuss and likely need paying off, but if it keeps the family from rowing, then maybe it's a small price to pay. Suitable TVs can be found by scouring the local free papers and second-hand shops. Just make sure you see them working before you part with any cash!

But a second-hand TV isn't necessarily the best bet if you want to do more than just play games. Why? Well, the long and short of it is that both RF video (which is what goes into the TV's aerial socket) and composite video produce noticeably lower quality than the Amiga's own RGB video output. The reason for this is that internally, the Amiga generates separate red, green and blue (hence 'RGB') signals which can be fed directly to a suitable monitor and displayed on screen with minimum modification, resulting in a high-quality image.

However, both RF and composite video signals have to be converted from the Amiga's RGB signal via a modulator or encoder, which requires that the RGB is first electronically combined together and then passed to the TV, where it is then decoded back to RGB. Inevitably some of the original signal will be lost because of the nature of this coding/decoding process.



RGB monitors: reproduce the Amiga's own RGB signals as faithfully as possible

The result? RF looks worse than composite video, and both are significantly inferior to RGB, particularly where high resolution screens and small text and graphics are concerned. Colour reproduction can also suffer and, all factors combined, using a TV as a computer display can make using productivity software such as wordprocessors, DTP packages and graphics and animation software quite a strain.

ALTERNATIVES

A better solution is to buy an RGB monitor. Sometimes a TV will have RGB inputs and, with a suitable cable (either bought or, if necessary, home-made) will work with an Amiga. Even better is a dedicated RGB monitor such as the Philips 8833 MkII or Commodore's own 1084S models. The trouble is that one of these monitors costs around £220-£230 new, and second-hand ones are getting less common by the month.

The best thing about RGB monitors is that they reproduce the Amiga's own RGB signals as faithfully as possible, giving a crisp, colour-rich display which makes for great graphics and sharpens up all your applications no end, making those parts which were hard to read on a normal TV entirely visible at last.

One thing recent converts from TV to RGB often remark on (as do PC users used to displays of 30kHz or more) is that Amiga displays can appear to flicker, especially at higher resolutions. The short explanation for this is that the Amiga's RGB output is at standard video frequency (15.6kHz) which is what makes it so adaptable as a video machine. Hence, it only refreshes the screen at half the rate at which a standard PC screen is refreshed – and the eye sees the difference as flicker, particularly where highly contrasting thin horizontal lines are displayed.

Most people quickly get used to the flicker but to circumvent it, newer Amigas with the AGA chip set can drive a multiscan monitor (i.e. an RGB monitor which is capable of higher than 15.6kHz displays) such as those produced by Microvitec or other manufacturers. Unfortunately for the feuding family, such a monitor doesn't come cheap so let's leave this train of thought right here.

Watch out

I have one last, but very important point to make. Always be very careful when buying a second-hand computer monitor. There are so many different kinds around, especially at auctions, that it is easy to buy something which doesn't stand a hope in hell of working with your Amiga. Particularly, don't buy a monochrome or amber monitor (since it won't display in full colour) and ensure that the monitor can display RGB at 15.6kHz PAL frequencies via an analogue RGB input. This last point is very important.

Also, make sure the monitor has a manual or, at the very least, a pin connection diagram for its inputs, since it might be impossible to work this out otherwise. If you can, get a written assurance that your prospective monitor will work with an Amiga and, if it doesn't, try to ensure you can get your money back later. If I had £10 for every reader's letter I'd had about unsuitable second-hand monitors they'd bought on spec I'd be having a nice holiday right now.

Contact

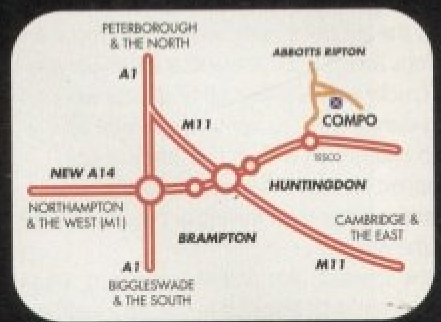
Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk.

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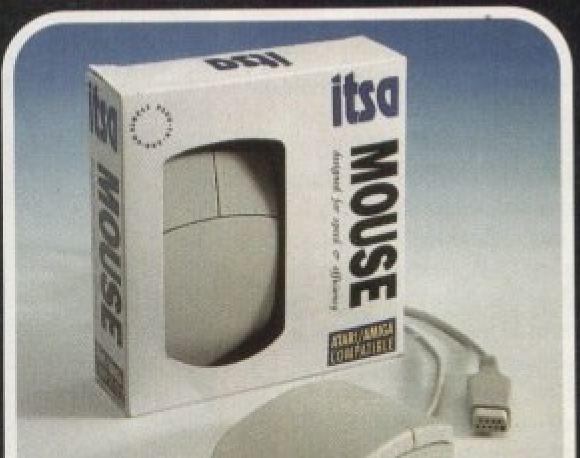


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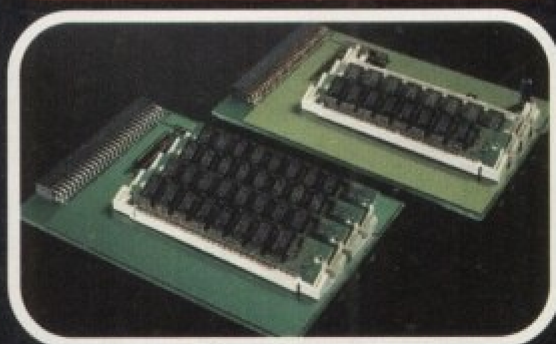
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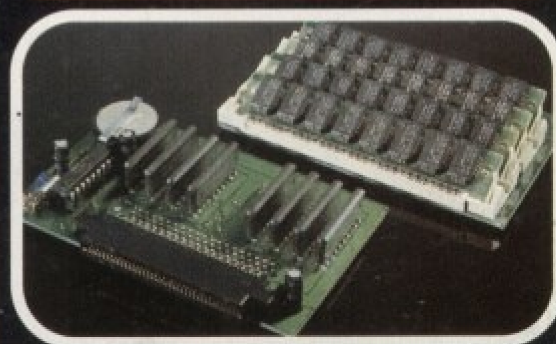
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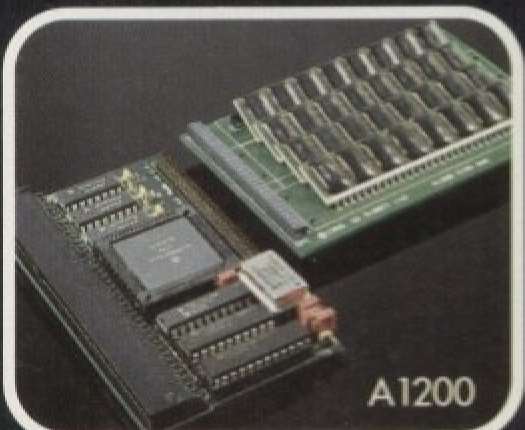
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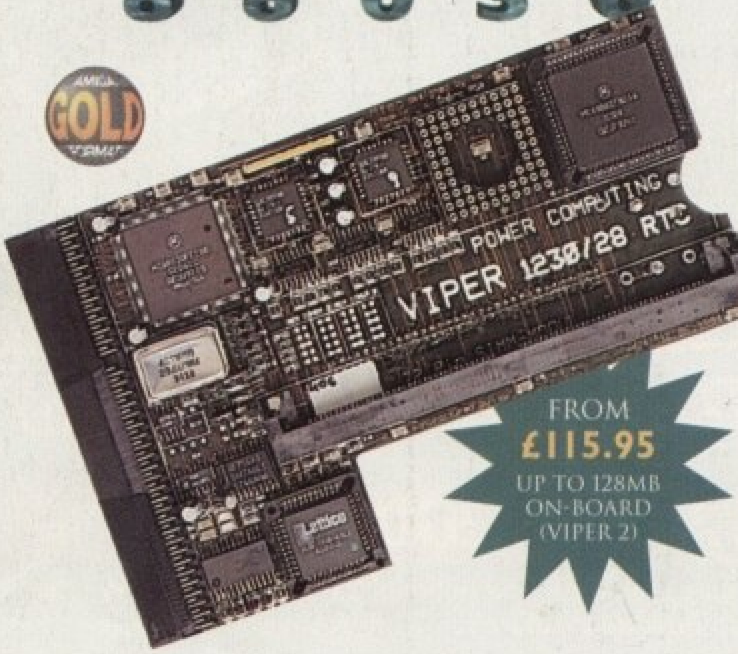
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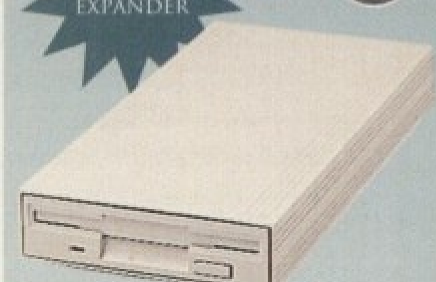
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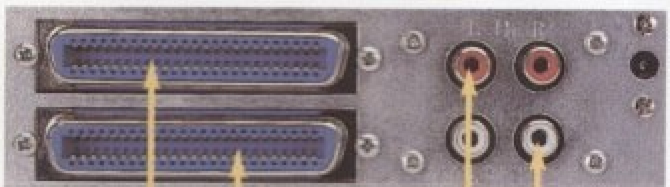
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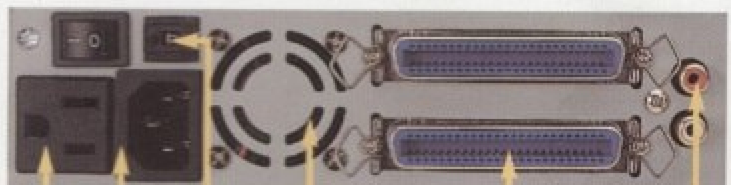
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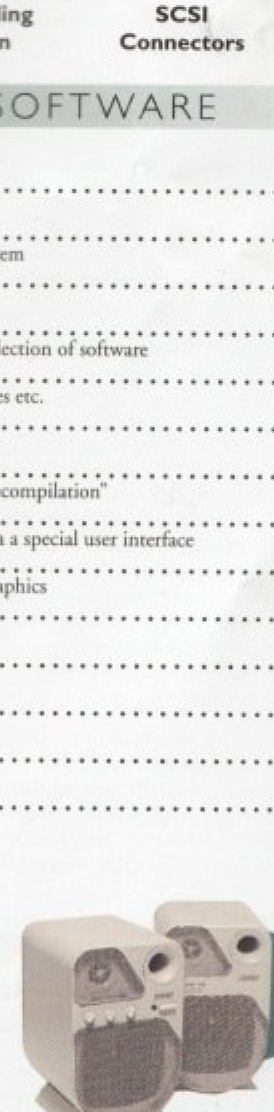
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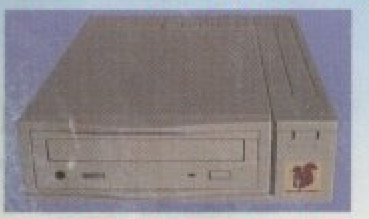
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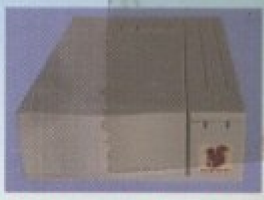
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the Squirrel SCSI interface

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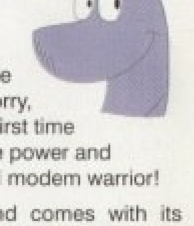
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